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ENERGY RESOURCES CONSERVATION
and DEVELOPMENT COMMISSION

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of 1996, AB 1890): Renewables.)	
)	
)	

RENEWABLES PROGRAM COMMITTEE WORKSHOP

Tuesday, December 3, 1996

10:14 a.m.

Held at the
California Energy Commission
1516 Ninth Street, Hearing Room A
Sacramento, California

REPORTED BY:

SUSAN PALMER

STAFF PRESENT
(Alphabetically Listed)

JONATHAN BLEES

CHERI DAVIS

CARRIE HILTON

MARWAN MASRI

VINCENT SCHWENT

TIM TUTT

ALSO PRESENT
(Alphabetically Listed)

CHRISTO ARTUSIO, Environmental Defense Fund

BARRY BUTLER, Science Applications Information Corporation

GEORGE E. DONLOU, Pacific Energy

RAY DRACKER, Bechtel Corporation

ROBERT ELLERY, United American Energy

RICHARD FERGUSON, Sierra Club

THOMAS C. HINRICHS, Pacific Energy Consultants, Inc.

ROBERT JUDD, California Biomass Energy Alliance

STEVEN KELLY, Independent Energy Producers

JIM KENNELLY, Project Development

DANIEL KIRSHNER, Environmental Defense Fund

CHET KRAGE, Thermal Ecotech

JODY LONDON, Working Assets

ROBERT LYNETTE, FloWind Corporation

ALSO PRESENT
(Alphabetically Listed)

ERIC L. MILLER, Foresight Energy Corporation

PETER M. MILLER, Natural Resources Defense Council

ORVILLE MOE, Energy 2000, Inc.

LES NELSON, California Solar Energy Industries Association

ALAN PURVES, Laidlaw Gas Recovery Systems

NANCY RADER, American Wind Energy Association

KATHY TRELEVEN, PG&E

HOWARD WENGER, Pacific Energy Group and the Photovoltaics
Utilities Collaborative

ED WHELESS, Los Angeles County Sanitation Districts

DANIEL WHITNEY, Sacramento Municipal Utility District

ERIC WILLS, Daggett Leasing Corporation

KEN WISEMAN, Consumers Utility Advisors

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PROCEEDINGS

MR. MASRI: Take your seats. Thank you.

Good morning. This is a different workshop than what we had to date. It is a Staff workshop, but it was, however, directed by the Committee. They directed us to hold this workshop.

And the main objective that we hope to accomplish today is to, through questions that we have come up with in the process of reviewing the material that is presented to the Commission so far, we hope to clarify certain aspects of proposals, elicit additional information if we can, and all this in an attempt to allow us to better evaluate what has been proposed so far, and assist the Committee in reaching decisions ultimately in early January.

As Commissioner Moore indicated, the schedule is going to be between now and January 3rd we would be preparing a mail-out to the parties for a hearing on January 15th. And this is the last scheduled workshop until the formal hearing around January 15th.

I'd like to say that, as usual, you have three days following the workshop to file any additional comments or clarifications or data that you may not have with you in response to questions today. You can still file it within three days.

I'd like to stress that the main purpose today is really information gathering, and it's not to make judgments about any proposal, about the merits of any proposal, either by the Staff or by parties towards other party's proposals. So keep it, please, on the level of providing information and withholding judgment to

the extent you can.

There is no importance to the order in which we will be examining the proposals. We have assembled a large number of questions that we would like to ask the parties today. And those questions were compiled by many different Staff members on the team that is assisting the Committee on this project, as well as a few consultants that we have.

In order to make this process a little bit more manageable, Vince Schwent will be the main conduit, if you will, for the questions that were assembled. And because they were assembled in a short period of time, basically over the holidays, they may appear disjointed in some places. So bear with us on that.

And we ask that you be very direct and very concise in answering the questions; and if you don't know, you simply say you don't know; in the interests of preserving time and getting through as many of the questions as we can today.

We will attempt -- let me introduce Staff here on the table. I'm Marwan Masri, the Project Manager on this project; Vince Schwent will be asking most of the questions; and Carrie Hilton is our Project Secretary. Tim Tutt is joining our project team on the Staff. And you all know Jon Blees, the attorney on the project.

As you see on the agenda, which was basically taken from the notice, following these remarks we will then begin posing questions to the sponsors of the proposals. And the way we will do this is identify the proposal that we will begin questions on. We will go through the Staff questions and responses. And then we'll open it to other parties who would like to ask questions on that proposal.

And so if you plan to ask questions about a given proposal, then you

need to get a blue card from Carrie Hilton, fill it out, indicate that you do plan to ask questions and which proposal you plan to ask questions on.

We simply need to get an indication of the number of questions we have, an idea of how many questions we have, but we don't know how many questions you have. That will give us an idea and allow us to manage the time better of how many questions we can expect from the audience. So if you plan to do that, please approach Carrie for a blue card and fill it out and get back to her.

We will begin with the proposal by AWEA, et al. That is AWEA and Biomass Energy Alliance and Geothermal Energy Association. And we expect that most of the questions really we have -- we have the largest number of questions on that proposal.

And then we'll move on to the Solar Industry proposals.

And then we'll move on to the proposal by the Counties represented by Jim Kennelly.

Following that we'll move to EDF, Working Assets/Foresight Energy Proposal.

And then after that we will begin to take the rest of the proposals.

So with that, would like the representatives of the the proposals by AWEA, BEA and GA to please come forward and receive the questions.

MR. SCHWENT: Since this is a consensus proposal --

MR. MASRI: Excuse me. One more thing.

Please when you come up, make sure you speak to one of these short, stubby microphones. Those are the ones that are connected to the court reporter, but

not the long ones. The long ones are simply a PA system. And for the reporter you need to use these short ones.

MR. SCHWENT: So hopefully you can get one of each type of microphone.

Since this is a consensus proposal, we have some questions first of all that deal with the initial parts of your proposal, I guess what would be the consensus parts of the proposal. So I'm not sure who would like to respond to those.

And then we have specific questions for each of the four technologies that are represented by the proposal.

So is there an appointed member of your body that would want to try to field the general questions first or perhaps discuss it amongst you there. I'll just put them out there and see who wants to answer them.

And, again, oftentimes our questions may be of the nature of "Have you thought about such-and-such?" And if the answer is no, just say "No." It's no embarrassment, and in the interest of time we'll get through them a lot faster.

The general questions first of all on the first section of your proposal, you have one percent allocated to marketing, which would be approximately \$5.4 million. Is there a basis for that number? Why did you think that was enough for marketing? And over how much time would you see that money being spent? How long is that supposed to be good for?

MS. RADER: I'll take it. I think that amount was felt to be enough to do an initial marketing effort. And I think what we're thinking of doing with those funds is using them to do market research pilots on green marketing to see really

whether marketing efforts pay off, because what I think we -- and we have thought about it further since we wrote our proposal.

And I think we don't want to take the step of doing an actual marketing board right off the bat, which is a very big undertaking. It requires legislation. It requires every member of the industry to pay.

But what I think what we'd like to do is to do some initial significant efforts to test the impact of those kind of efforts to see whether a marketing board would pay off for the industry. So that by the end of the four-year period we would see using those funds over the four years, or perhaps into five years by determining whether a marketing board makes sense for the industry.

And we think we can do a lot with those funds, using them for market research, for testing marketing messages to actually check customer response to those messages with actual green marketing going on in conjunction with green marketers, not actually doing the marketing but advertising in conjunction with marketing efforts, to figure out really -- to test some of those polls. You know, there's a lot of polls out there that suggest that everybody wants to pay for renewables.

But what we really need to find out is will customers switch to a renewables provider. How much more will they pay. Which messages will they respond to, and those sorts of things.

MR. SCHWENT: Okay. For purposes of the court reporter, do we need to have people identify themselves, Marwan, do you think, as they speak, or for the transcript?

MR. MASRI: Yes, I think that would be a good idea.

MR. JUDD: Vince, if I could just add briefly to that.

In the past week we've talked to parties who have been involved in some of the marketing boards for other types of commodities in the state. And we've talked to people in the advertising industries who do focus groups and try to stratify groups of customers and such, to try to use tested methods to validate an approach to the market and then ultimately through the marketing board, if one is set up, to instigate the generic kind of activities that would lead people to this, separate from activities that individual and green marketing companies might do themselves, or energy marketers might.

MR. SCHWENT: So besides the market research, have you talked about would you see some of this \$5.4 million being used to do these state -- if not statewide, at least targeted marketing on behalf of renewables generically; is that the idea?

MR. JUDD: Yes, yes.

MS. RADER: Yes. But I think we'd probably want to do it in conjunction with some actual marketing efforts in order to test the actual response rate.

MR. SCHWENT: Okay. And, Nancy, you probably already answered it, but in the future then, therefore, after this money is gone, post-2002, the continuation of this kind of marketing you would make that decision at that time as to how to find funds from the industry or how that would be financed; is that your response?

MS. RADER: Yeah. I think what we would need to do is convince the industry that a marketing board would be worth the effort and the money that it would cost. Basically you're taxing every member of the industry, is what you would have to do. And so you have to convince the industry that there's a value to that. And that's what we would aim to do through these efforts, is to determine whether there is a value and to demonstrate, if there is one, to the industry so that they will then want to create a marketing board.

MR. SCHWENT: Page 4 of your Consensus Proposal talks about a variety of ways, in the middle of the page, of using utility bill inserts to hopefully encourage customers to support renewables. Can you give us some specific examples of what things you had thought of for those bill inserts?

MS. RADER: I think one of the things we want to do is explain to consumers what they should be looking for when marketers are making claims about renewable energy. In other words, to educate them about the certification process and to look for disclosure about certified renewables.

And then to educate them about what renewables are and the environmental impacts of electric generation and why they should care about selecting a marketer that has renewable energy in their portfolio.

And then perhaps also linking them up to an 800 number with actual marketers of green power.

So to use it as a tool to educate consumers and to sort of develop those green markets by identifying those customers that are interested in renewables. And so, there's a tremendous value to reaching all residential consumers through the

utility bill insert, because obviously it'll be a tremendous cost to reach those small residential consumers who are the ones who are going to care about renewable energy.

MR. SCHWENT: Okay. Some of the other proposers in their proposals have suggested that for existing renewable generators that use at least part fossil fuel, up to presumably the 25-percent limit currently allowed by BRPU, that only the renewable portion be eligible for any incentives or whatever other ways might be found to distribute these moneys.

Your proposal, as I understand it, for existing plants would also have that 25-percent fossil-fuel powered part eligible. Is there a rationale for doing that for existing plants as opposed to new plants? Why would you want to give that money to the fossil-fuel portion of existing plants?

MR. REESE: Vince, I'll try that. Phil Reese from Biomass Alliance.

The allowable 25 percent of fossil fuel in a qualifying facility is a FERC regulation. And we're stuck with that.

Our proposals in the past have considered up to 25 percent of fossil fuel usage would allow a plant to be considered a hundred-percent renewable. But as soon as that 25 percent was exceeded, then it would be a step function, and only the renewable portion would be eligible for whatever benefits it's eligible for.

We haven't codified that, but our purpose in leaving the 25 percent in was simply to be consistent with the QF definition of a qualifying facility.

MR. SCHWENT: Okay. So if I understand, for purposes of definition, it's consistent with QF, but is there a fundamental policy reason or economic reason

why if you're not going to give incentives to the fossil-fuel portion of a new plant, you wouldn't do the same thing to the fossil-fuel portion of an existing plant?

MR. WILLS: This is Eric Wills, the Solar-Thermal Electrical Alliance.

But I think for the new plants, we also say if they're under 25 percent they are fully renewables.

Is that correct?

MR. JUDD: Yes, that is.

MR. WILLS: So I think what the rationale is -- and let's take a central receiver plant or even a new trough plant, for that matter, you're going to have to make an economic, conscious decision based on your investors and your market whether you want to stay under that 25 percent or right at 25 percent, or go to 50 or 60 or 70 percent. And there's some recourse in going over there.

You can be considered all renewable under 25 percent, but if you break the tradition, since the late 1970s and early '80s, of 25 percent and under as renewable, then your economics are going to have drastically improve.

And I think you've heard testimony here that says for some solar plants the economics do drastically improve as you increase your fossil content, but that's more of a decision for a new plant.

For the existing plant, obviously we have guidelines within our contracts and debt and equity and everything else about this 25 percent.

MS. RADER: Yeah. I think the public policy reason would be that these investments have been made with those rules and so we don't want to change the rules for those plants. I think that's probably the best policy rationale.

MR. REESE: Vince, may I say one more thing? At least for the biomass side, I testified a couple of workshops ago that there is a strong profit motive that drives all of us regardless of the regulations. For a biomass plant, our incentive is to minimize gas use because it's the most expensive fuel.

And I would say across the board biomass plants in the state probably use less than five percent gas.

MR. SCHWENT: Okay. On the top of page 6 you talk about a definition of emerging technologies under which you would propose to exclude solar central receiver and dish, Stirling Dish solar technologies. And you suggest funding those through R&D.

MR. HINRICHS: Vince, before we go to that, could I just make a comment about the green marketing program?

We in the geothermal industry have indicated a customer rebate program that would be in that arena and fully support the one-percent to general green marketing. I'd just like to make a distinction there.

MR. SCHWENT: Right. Well, we'll get to the -- when we get to the specific geothermal questions we'll talk a by the that.

MR. HINRICHS: Well, I think this is more in general. There are a couple of things that are involved in this desire to get the customer involved in a green marketing program. One, which is certainly within the realm of this one percent for an overall program is basically education and getting out there to the general public.

There's another aspect of getting people specifically involved, suppliers

and consumers involved in contracting for renewables directly. And so this whole program, I think, needs to be looked at together. It may seem that the one percent for this overall program is small.

I think it's a good amount of money for initiating the educational-type of things. But incorporated with that are some of these beginning programs of direct contracting between a supplier and a customer. And those may be rifle-shot things that are involved at the same time that this overall education for the general public is.

MR. SCHWENT: Okay. Thank you.

At the top of page 6 again you offer a definition of emerging technologies in which you would propose to exclude solar central receiver and Stirling Dish technologies, and fund those inside through R&D.

Is there a particular basis for coming to that conclusion that you could briefly give us?

MR. REESE: I'll take a shot at this. We considered the relatively short period of transition in the four years for which support is probably available, and suggested a new definition that said if a technology, whatever it is, doesn't offer a pretty good shot at being commercially competitive at the end of that transition period, it should be supported out of other funding rather than this transition support.

So our intent was not specifically to exclude any particular technology. We redefined the term "emerging," or at least we suggested a redefinition. And then observed that as far as we can tell, the solar central receiver and Stirling Dish

wouldn't meet our definition.

MR. SCHWENT: Okay. Thank you.

Along those lines, that definition that you proposed, I think you included "ability to compete directly in discrete market applications in California" would be part of the addition to the definition.

If there was a technology such as solar central receiver, which may have overseas markets in the near term, was it your desire that that be a hard and fast requirement or that it might be possible for a technology to have near term markets overseas that eventually can bring the benefits of that technologies back to California in the future?

MR. REESE: Well, I think we read the legislation to support -- or to provide support for instate renewables.

MR. SCHWENT: Okay. Regarding the definition of "emerging," there's no discussion of it, I'll just ask you: Is it your positions that with regard to your technologies, biomass, wind, geothermal and SEGS, that you don't see the need for emerging technologies or see candidate technologies in your particular arenas? Is there a need for emerging technologies in the biomass, wind, geothermal, SEGS area? Are you able to achieve market competitiveness essentially with the technology that you have now?

MS. RADER: Well, in the case of wind, I think wind could be classified as an emerging technology because I think our technology is improving, our costs are going down. We're expanding our market opportunities.

So I think wind fits the definition of -- I think a big part of our proposal

is to retrofit and repower our existing wind farms with new technology. And so I think that we are aimed at the same goal of reducing our costs and improving our technology with the goal of being competitive at the end of the transition period.

MR. SCHWENT: Are there any particular biomass or geothermal technologies that are crucially needed in order to make these industries cost-effective by 2002?

MR. HINRICHS: Not in geothermal.

MR. REESE: In the biomass area, there's a very large number of relatively small improvements that can be made to the individual plants. I could give you quite a long list, but they're all aimed at either improving the efficiency slightly or improving the reliability slightly.

Now our plan to reach market competitiveness at the end of the transition period was largely anchored in reducing the fuel costs to the plant to zero by the cost-shifting mechanism, which is another forum other than this one, and a modest improvement in efficiency and reliability, which in effect reduces the O&M costs.

Now you might say if I give you a list of 50 small improvements that this one looks like an emerging technology, you probably would be right. We don't view any -- we don't see any emerging technologies in the biomass power production.

Frequently gasification is brought up as one. That certainly is a technology. It doesn't remove any aspect of the fuel collection, processing, transporting or handling. You've still got to get it there.

As near as we have been able to tell in today's world, a gasification plant, which starts with biomass, would be more expensive than a direct combustion plant.

MR. SCHWENT: Okay. Eric for solar trough, the same situation, just incremental improvements or --

MR. WILLS: I think the way we looked at this is this is industrywide consensus proposal, and there's limited funds. And I'm sure that any one of the technologies or any one of the people in this room could make an argument for an emerging technology. However, we think with the available funds that are here, the best use of those funds and the most efficient use of those funds for SEGS is through the infrastructure of the existing facilities.

Now of course in some of the moneys that are going to be spent, are we going to improve our mirrors and our heat collection tubes and are sun sensors and alignment and heat transfer fluids? Of course we are. And we believe that by doing that and demonstrating how that works at the existing facilities, any new/emerging technologies that would come out of that for SEGS facility obviously would benefit.

So, again, we think that -- you get into some classification issues here, but we think the best use of the funds is proving that stuff in the existing facilities.

MR. SCHWENT: Page 10 of your Consensus Proposal, in the middle of page, you talk about there are various ways -- you're considering various ways that a customer bill check-off mechanism could be used to allow customers to add some dollars to their bill payment to support renewables.

Do you have any specifics on that customer bill check-off? I presume

that refers to the voluntary mechanism?

MS. RADER: Yeah. We really haven't thought that through in great detail. I think our -- well, it's my understanding most people are thinking of it in terms of sending money to the general fund that goes to support renewables overall however it is ultimately allocated, that it add to that pot and be distributed, either in the same ratios that is being proposed overall or perhaps earmarked to one particular fund or another.

I think some people have a concern that having that check-off mechanism will detract from green marketing efforts. And some are concerned that it will undermine those efforts by giving consumers a sort of easier way to do that.

I think that it might be possible to phase that in and target it to those customers who don't have direct access yet, who don't have any green marketing option, to give them an option to support renewables as direct access as a thing phased in. That's one way to address that issue.

But I know that's one concern of some of the parties.

MR. SCHWENT: Looking back at that marketing allocation, your one-percent marketing, why did you put that under the new category as opposed to some other classification? Is that --

MS. RADER: I think because it's geared towards developing new markets, markets for -- well, markets that are new for renewables and that would support new projects ultimately.

MR. SCHWENT: As opposed to support markets for existing plants that are able to sell their power into new markets?

MS. RADER: Yeah. I think it would provide for both. It would provide a market for both. But ultimately I think what we want to do is re- -- new markets, but, yes, it's debatable --

MR. SCHWENT: Okay. Where you would put it.

MS. RADER: -- how that -- perhaps it should be split half and half.

MR. SCHWENT: If the CEC recommends that other fuels or technologies, such as hydro, landfill gas, municipal solid waste, tire burning, fuel cells, whatever, be allocated a portion of these funds, then how should your recommended allocation be modified to incorporate these additional fuels or technologies?

MR. REESE: Just for clarification, before we even try to answer it, in the biomass proportion there are three MSW plants and one tire burner in the state. Two of the three MSW plants have a 9-cent per kilowatt hour permanent floor under their SRAC. They, in our opinion, are not eligible.

The remaining MSW plant and the single tire burner are included in the biomass share. So your question really applies only to the hydro and the landfill gas and whatever else you listed.

MR. SCHWENT: All right. So with regard to landfill gas, hydro, they don't generate a lot of power compared to some of your industries, if you look at the historic generation. How would you incorporate them in your proposal?

MR. JUDD: Well, I think if you read the submittals that we've made in the past, Vince, we have raised concerns about hydro in it because it is a mature technology. It often is built for multiple purposes and how do you segregate out

electricity. It's been heavily subsidized. It has high variability seasonally in it.

With regard to the landfill gas, we had questions amongst ourselves as to whether all landfill gas or some portion of landfill gas needed funds in order to sell their electricity at market. In some cases they're supported by tipping fees. In many cases they're supported by a tax credit at the federal level, but it'd go away if they received funds from this.

So the question of the extent to which either of these fit remains, in our minds, an open question. And we chose at the time we did the proposal not to include them in the proposal.

MR. SCHWENT: Along those same lines, what role would Customer CTC rebates fit play in your proposal? There seems to be essentially no role for direct rebates other than in the geothermal proposal. I think there's some options there. But with regard to the rest of the technologies, you don't see using CTC rebates; is that fair?

MS. RADER: Yeah.

MR. HINRICHS: And in geothermal it's not considered a CTC rebate. It's a customer rebate that would come out of the fund.

MR. SCHWENT: Correct. Thank you.

MR. MASRI: Let me just follow up on that a little bit. Now there is in AB 1890 a provision that whatever we come up with in the Commission has to allow customers to receive rebates from the funds.

How do you reconcile that requirement with what you're proposing?

MS. RADER: I think we don't read the legislation in that way. When

we developed the words in that bill, and we were involved in that, the intent was for the Commission to recommend which mechanisms were appropriate. And it was not to dictate that every single one of those mechanisms be used.

And if you look at the words that precede that list, it says "the CEC shall recommend." And so I think the CEC needs to use its judgment in recommending which, if any, of those mechanisms are the most appropriate.

I think that's our strong belief that that was not a list of -- and that's because there was a big debate about whether and which of those mechanisms made sense.

And so the whole thing was thrown to the CEC to help to figure that out. And there was strong disagreement that those mechanisms -- that mechanisms were the best mechanisms. And I think that's what we're doing here, is trying to figure out which mechanisms make the most sense.

So I wouldn't agree that you would need to endorse any customer rebate mechanism necessarily.

MR. REESE: Well, I would interpret it the same way. But I think you perhaps put your finger on one of the truly major questions in this discussion, and that is: Do the funds go to the renewable generators or do they go to customers in some fashion to build a market.

Each of the four industries at this table has presented a plan by which it intends to become competitive in the market at the end of the transition period. All four mechanisms are different, but they're all mechanisms to become competitive.

If we achieve our goals then there will be no need for a specific

over-market group of customers to support our industry.

Our concern is that if -- for at least some of us, if the money is given to customers to build a market, there may not be any generators around to supply it.

So the key is that we've provided a plan, four different plans to reach competitiveness in the market by the end of the transition period, but it takes the support money to do it.

MR. JUDD: If you want to stabilize the output, Vince, if you want to maximize the output of kilowatt hours from the renewable sector, the prudent course to do that is through retaining the generation base.

If a significant proportion of the funds were to go to customer refunds, it would destabilize that generation base and quite possibly create advantages for some generators at the expense over others. And you would have a diminishment of renewable output generated over time.

MR. SCHWENT: Now would you feel as strongly with regard to not rebates but money going directly to consumers in one form or another, not perhaps the rebates that were intended by the Bill, with regard to new generation? As existing, is new generation an area that might be more appropriate to have some sort of mechanism that puts money directly in the hands of the customers?

MR. HINRICHS: That's certainly the geothermals position in their proposal.

MR. SCHWENT: How do the other technologies feel about that with regard to new generation?

MS. RADER: I think our feeling is it's an inefficient way to get new

generation, that there are other ways to develop green markets besides giving money to consumers that then has to be routed back through the power marketer to the generator. That's just a very inefficient way to distribute funds.

The goal is to generate renewable kilowatt hours.

We envision developing those green markets at the same time that we stabilize the renewable generation base, so that at the end of it we have a better understanding of how to develop those green markets, that we have an operating renewables base that is surviving under market conditions.

So what we don't want to do is to sort of bang our head against the CTC wall when the CTC is going to be gone in the year 2001. The market is going to be much better for all the renewable generators in 2001.

We just don't think it makes sense for our industries, and I think even geothermal is looking at it for new and for post-2002 markets, but what we're trying to do is keep our industry whole until the year 2001.

MR. MASRI: Yes. I have a few questions of a general nature. The first one is it really occurs to me that -- we have a proposal here from the Geothermal Energy Association, the American Wind Energy Association Alliance and Biomass Energy Alliance. The question is: What is the degree of representation in each of these industries for these proposals?

In other words, if we can just go across here and if we do geothermal and all other industries, can you give us an idea what percent of the industry, either number of firms or megawatts, are signatories to your proposal or endorse it?

And, conversely, what percent or how many people really are not on

board with your proposal?

MR. HINRICHS: I'll start on that. The geothermal industry is relatively small as far as the number of organizations that are participating with the existing plants. And I would have to say that I have surveyed most all. And in our -- and let's say the majority, the great majority of the industry was very much interested in the programs that emphasized new.

But as things were unfolded and we began to communicate with all of the industry, there were some out there that felt that shoring up the existing plants was an important aspect. And that's why we have a ten-percent production incentive as part of our program, to accommodate those that may be folks that have just an ownership in one plant, that don't have a desire for future development.

Most of the geothermal industry are operators that have additional resources that they can produce, or developing new resources. The so the majority is very much on board with the program for new capacity.

Marwan, I would have to say that there may be one or two plants out there that I haven't heard directly from that bought into this. But we're very close to it. And I feel confident that we will not have any dissenters.

MR. MASRI: Okay.

MR. WILLS: On the Solar-Thermal Electric Alliance, we represent all the SEGS plants, 354 megawatts, \$1.5 billion in capital assets.

We effectively produce, if not all, most all solar-thermal electric power in the state utility grid.

MS. RADER: AWEA represents all of the wind operators in the state as

well as the manufacturers.

Our proposal was developed first with a meeting of, I don't know, 15 or so of our operators, which was then paired down to a steering committee of five of our seven largest companies.

And the overall proposal here is endorsed by, I think, every single one of our companies. In other words, the idea that it makes sense to divide the funds by industry to let each industry decide for itself; I would say we have about 95-percent agreement on our proposed wind allocation approach.

There was one company that preferred a different approach but so far is agreeable to the overall industry's desire. So I can confidently say that we are in touch and representing our members.

MR. REESE: Unlike AWEA, the Biomass Alliance is limited to generating plant owners or specific owners' representatives. There is a secondary representation of our fuel supply infrastructure participants, but they are not members of the Alliance.

The Alliance is supported, and our activities are supported by voluntary contributions by the members.

We believe we represent over 95 percent of the operating and operable plants. Of the operating plants, I believe there's only one, Diamond Walnut in Stockton, which is not a member -- although they've called me and we haven't touched base yet. And we represent about half of the plants that we classify as operable but not currently running.

MR. JUDD: And importantly too, I think, Marwan, is that we represent

all of the parties who are participating in the deregulation discussions within the biomass industry.

MR. REESE: We've made great efforts to check out all our proposal points and concepts with enormous conference calls and frequent meetings.

And as far as we know, we have no dissenters, whether they are dues-paying members of the Alliance or not.

MR. MASRI: This is, again, a general question of -- maybe this falls in the same category, Nancy, that maybe you don't have to address everything in the Bill, but at this point we think we have to address everything that we're asked to do.

And this has to do with rewarding the most cost-effective. Could you give us an idea how your proposals do that?

MS. RADER: Well, in our case I think providing a production incentive provides the incentive to the market to produce. And those that produce are the ones that benefit.

In other words, if you repower, you generate a lot more kilowatt hours and you reap a lot more benefit from the production incentive. So I think in that sense it's a market base, and it generates competition amongst suppliers to increase their production in order to benefit from the incentive.

MR. WILLS: I think if you look at our proposal, it's not on kilowatt produced. And that's because if we have a repowering or we want to take out some pumps or motors or do some deferred maintenance that's out there, it may have the facility shut down for a short period of time. We think that with the SEGS plant it would deincentivize the producer out there to constantly go after that next

megawatt in those four years.

What we're looking towards is long-term sustainability. In order to do that we need to invest in the infrastructure of the plant. And if we continue to just take the short-term aspect of that next kilowatt, we probably won't make the best decision, because our plants are so capital intensive.

So we do have the incentive there, but it's not based on a kilowatt. And I think as a general view, the way we look at it, I would say amongst the industries is our industries know the best on how to most efficiently use those funds.

And that's kind of the concept that we all came up with, is allowing each industry or each technology to determine the most efficient use of the funds.

And in our case, the most efficient use of the funds is to directly pour it back into the plant.

MR. HINRICHS: In the case of geothermal, with the money allocated for new projects, we have indicated that there would be a cost-effective review of that. And that in the case of the loan fund, those applying for money from the loan fund would be on a competitive basis of getting the most megawatts installed for the amount of the loan fund utilized.

In the case of customer rebates, a similar criteria of having the most megawatts installed for the amount of rebate that was going to the customer.

In the case of the ten-percent production incentive, we basically indicated that when that comes in, we've kind of established a date late this next fall, that those that desire to participate in the production incentive would make application for that and would have a due diligence associated with how that money

would be utilized to assure that they would become more competitive as they reach the end of the transition.

MR. REESE: For the biomass industry, I presume you're using the term "cost-effective" in terms of cost to generate a kilowatt hour of electricity. If that's your definition I would submit that that's the wrong one because the electricity produced by a biomass plant is a by-product of its waste management function.

Now rather than string this out with 50 stories, let me give you just one concrete example.

My plant which is the newest and the most modern technology in California uses a lot fewer tons of wood waste to produce a kilowatt hour than many of the earlier great style designs in the northern part of the state.

Riverside County, where our plant is, would be a whole lot happier if we used twice as much wood to make a kilowatt hour because of the waste disposal function of the plant. The difference is the amount of ash produced.

Most of the northern plants that run rather than inefficiently and use lots of wood produce what is a pretty good soil amendment, and spread it on agricultural forest lands for soil amendment or soil improvement processes.

Ours, which doesn't produce very much ash, is being used to build interstate highways on. It's a terrific road base.

So I would submit that in the biomass plants, the cost to generate a kilowatt hour is perhaps the wrong measure.

Now to answer your question specifically, our industry is bleeding to death. We've told you a number of times we have perhaps 27 or 28 operating plants

and about 14 that are shut in, but could come back, another 20 that are gone permanently.

The market has largely made the decisions as to which ones are cost-effective. If we're still running or looking for a chance to run, those are the survivors.

MR. MASRI: On page 2 of the proposal, and I think that's what triggers this question that I just asked, there's a statement that the allocation -- this is now on page 2, Roman I, second bullet. And in the last sentence of that bullet, the statement is made that the allocation is lower than what is required to meet the needs of each industry. That is, the allocations that you are proposing.

And the first question is: How much lower is that than what's needed? And because it's lower than needed triggers the question I just asked, then there must be some way of deciding who gets the money and who doesn't, since it's not enough to give everybody what they want.

MS. RADER: Well, I think when we were advocating in the course of the development of AB 1890, the amount of funds that we estimated we needed to do what each of our industries need to do, was about 650 to \$700 million.

And so we all started out in this process swallowing hard and realizing that we can't all get what we need to do what we want to with our industries.

In the case of wind I can tell you that if we had a higher production incentive, we would have more repowering. But that means that solar thermal doesn't get to do what they need to do, and neither does biomass.

And so we all just swallowed hard and said, "We all can't be happy here.

And we all have to settle for less than we need because we know there aren't enough funds here to do what everybody needs to do."

But the bottom line for everybody was that the amount of money that we settled for in our negotiation was enough to make a big difference in each of our industries. And I really think that's bottom line.

And that's why each of us signed off because it was a meaningful amount of money, or in some cases barely enough, but enough to make a difference.

MR. JUDD: It wasn't modeled in the way one might model a theoretical circumstance, but it was a very self-policing exercise as the industry came down and tried to respond to the call to come back with a coalition.

On the part of the biomass industry, we certainly didn't want the wind industry to be seeking a windfall at our expense. We know roughly what their costs are. They know quite well what ours are. And it goes all the way across the table here.

So the effort was made within the constraints of the fund to do something that was fair, agreeably fair among all parties. And if you try to model it out according to a formula you would devise, you wouldn't get to that same point of balance, I think, that the group was able to come to itself.

MS. RADER: But to some degree I think there was a little bit of science in that, for example, we took the numbers back to our folks and we said, "A .65 adder is enough to do something, but anything less than a .65 adder really starts not to do what we need to do."

And so I think that's an important point to keep in mind because I think

we've struck a very delicate balance here that allows each of us to do something meaningful.

And I know in our case if our number goes down, it doesn't allow us to do what we want to do.

MR. MASRI: Okay. I think we're pretty much done with the general questions we have. We do have questions for each area from the Staff. And I also have some members of the audience who would like to ask questions of the parties. So between them and the time of the next half hour, I'd like to call on these people and have them address questions to the panel.

Kathy Treleven of PG&E. And if you'd please use that podium when you come up here to ask questions.

MS. TRELEVEN: I'm Kathy Treleven from Pacific Gas & Electric. And I have just two short questions today.

First of all, internally we've been doing a lot of thinking about our obligation to put something on the Bill or include something in the Bill to call up voluntary funds, sort of the second half of the moneys. And already we've sort of come to the conclusion that if we do this well, if we do this together with the industry folks and the environmentalists who are interested in this issue, we'll get a lot more money than if we don't.

And also there are going to be a number of difficult issues along the lines of what Nancy raised in terms of distracting from marketing efforts, for example.

But one of the first things that some people internally at PG&E have

proposed is that it'll be a lot clearer for invited participants, people invited to contribute if we tell them that the money is going to new or emerging projects.

And I wanted to get the panel's feeling on that since you represent both the new industry and the existing industry.

MS. RADER: Well, I guess my first comment is that I'm not sure we know that. I think what consumers care about is getting clean, renewable energy at the lowest possible cost. And I don't think they particularly care if it's from a brand new shiny wind turbine or one that's been around for a few years. I just don't buy that argument right off the bat.

I don't think that means necessarily that we couldn't use some kind of voluntary check-off funds for a new facility, if that's where we decide -- you know, if we decide there needs to be more funds in that category for emerging or whatever, I don't have a problem with thinking about earmarking those funds somehow. But I don't think the consumers will give more because it's a new plant versus an old one. I think what they care about is low cost and clean.

MR. JUDD: Kathy, I'd just add that we've had discussions among ourselves, too, about the voluntary funds. And from our particular perspective we think it's a wonderful idea. We can see where it does work well for new projects.

But if it's only for new projects, we worry about an ingrained prejudice against existing projects and a zeroing out of the external benefits that many of the existing projects bring, which, in fact, is what many of the purchasers would want to support: Cleaner air, energy diversity, all of those sort of things.

MR. REESE: I would add that in a voluntary program of any sort, if it

were earmarked for new projects -- and I interpret "new" as meaning those which have yet to be built and financed -- it would be difficult to finance anything when you tell the bank that the revenue is voluntary.

[Laughter.]

MR. WILLS: I guess there's also concern on the size. It might be able, for smaller facilities, to say, 'Yeah, it looks like there's a wide enough margin if you have volunteers coming and going,' but to finance a 120-megawatt SEGS plant, I think I'd have the same concerns.

MS. TRELEVEN: Thanks. I realize that was going to be controversial, but I did want to get some input.

The second question, PG&E recognizes that the funds set aside for renewables were really thought of as funds not for utility renewable projects. It's sort for the rest of the industry.

But it's possible that some of our geothermal or some of the smaller hydro we have that would meet the below-30-megawatt test might be divested in the future. And if divested, if owned by someone else who would have the same problems other renewables have of perhaps making it on the market, I wanted to get your feeling about its eligibility for these funds.

And, secondly, it's sort of a variation, I see in the future a possibility of collaborative efforts to increase renewable output. Perhaps where a plant is partially owned or other parties are interested in increasing the output, say, from some of the geothermal plants. So, in other words, a project that is, say, 40 percent PG&E's and 60 percent somebody else's. And would you see these projects as partially eligible for

these funds in that case?

MR. HINRICHS: Let me speak to the geothermal handling of the geysers. I think as most people in the room know, there are geothermal steam producers of the geysers that sell steam to PG&E and other utilities up there.

And geothermal has some, let's say a unique aspect that other renewables don't, in that the fuel comes from wells in the ground. And those wells have a tendency, particularly in a mature field like the geysers, to decline. And that there can be things done. There have been things done at the geysers to enhance the production of the field.

And in the case of geothermal, we view new as new production from existing fields. So we have incorporated in our piece that enhanced production that might go through an existing plant would be considered new. And then that applies to other geothermal fields, too, where just by drilling wells you can get additional production of energy.

We haven't really, in the geothermal industry, really wrestled with utility owned versus privately owned. There are some opportunities there that geysers plants might go up for sale.

And I think our view would be that if it no longer has a contract, that PG&E may have some caveats by selling their plants, that they continue to sell the power to us. But if that wasn't the case, where it was a free plant, that I think that would have a validity of being considered a new facility going into the market because it has no customer and it has a new owner. I would view that as a new project.

MS. RADER: I would just add that in our answer to Question No. 5 on page 8, we had indicated that we would exclude resources from funding if they are utility owned resources that are eligible for CTC funds or cost recovery through PBR. So that would say if you would sell it off and you weren't under that circumstance, then it would.

MS. TRELEVEN: I did want to double check that.

MR. REESE: Well, if you were talking about the shared ownership any renewable generator, it might be a case where the part that the utility owns is eligible for PBR or CTC support, and if somebody like the PUC can figure out how to separate that, then we might be able to figure out how to make the private half eligible.

MS. TRELEVEN: Okay. Thank you very much.

MR. JUDD: Vince, that points out something about our proposal. Kathy's question raises good questions. But I think Nancy, representing the wind energy industry, and the rest of us, really don't have an opinion and probably shouldn't have an opinion about how geothermal responds to that. They know better.

And in this consensus-building process, it allowed those who know best to define the most appropriate course of action in the future.

MR. SCHWENT: Okay. Mr. Ken Wiseman.

MR. WISEMAN: Good morning. Ken Wiseman with Consumers Utility Advisors.

I did speak last week. And I'm a little concerned with Mr. Judd's

comment that he represents all parties in biomass that have been involved in this proceeding.

We are not currently an owner of a biomass facility but for the last two years have been working because we think we can be there competitively and long before AB 1890 or this money was available we were involved.

And I think, although I just heard Mr. Judd worry about the prejudice against existing facilities, in the coalition's proposal by not making money available to those of us who think we can enter this market competitively, your proposal is now totally prejudiced against new facilities; is it not?

MR. JUDD: The proposal that is out there from the biomass industry represents just existing facilities at this point. The proposal was written before your proposal surfaced.

MR. REESE: And what I did say was the Alliance represents operating and operable plants.

MR. JUDD: Yes.

MR. WISEMAN: Right. But when we speak of -- speaking as to Mr. Judd's comments of that "we speak for the whole biomass industry." And obviously I represent people who have biomass fuel and are interested in how we can better manage that. And we think we can handle it if we don't have to pay a CTC, and may well end up working with one of your mothballed facilities and --

MR. JUDD: Sure.

MR. WISEMAN: -- most likely probably will. But we don't get that option in the proposal because money is only available for existing facilities.

MR. JUDD: That's correct at this time.

MR. WISEMAN: At this time. That's an opening.

MR. REESE: Well, see, a mothballed facility is an existing facility.

That's what we call operable.

MR. WISEMAN: Understandable, but --

MR. REESE: And eligible for the funds.

MR. WISEMAN: Right. But if in our proposal to manage our biomass, it is better for us to build a new plant, we will not get these relieving funds under your proposal.

MR. REESE: Well, I think the answer is: We hadn't seen your proposal and didn't even know about it.

MR. WISEMAN: Well, I -- we've been around, but obviously had thought we would not be a new tech- -- or new facilities would not be taken out as an option.

So we would only ask that you consider that that be put in so that there not be -- if there is an incentive to handle this biomass and it means building a new plant, that that be part of your proposal.

MR. JUDD: Good. That's something we --

MR. SCHWENT: Mr. Wiseman, could I ask you a quick question?

MR. WISEMAN: Yes.

MR. SCHWENT: Since you're looking at building a new biomass plant, if there was some of these funds made available for a competitive process across technologies, such as EDF has proposed for the construction of new generation

facilities, do you think your new biomass plants could be competitive with new geothermal, new wind, new whatever else might be out there?

MR. WISEMAN: Quite honestly the reality is we're going to be most competitive probably by taking one of the existing plants in our area, because it's going to be much more affordable and make that work.

We're not sure that, yes, there might be that possibility; that indeed, as some of the plants we've looked agree, and depending again where our location is, because as it was pointed out, everything is fuel, and where we have our fuel. And it may be better to construct a plant, and we would look at those certainly.

We see it as competitive if we're not having to pay the CTC, and the flexibility to look at whatever offers us the most return.

And we got very much more excited this past week as the federal EPA came back and told us about particulates and no open- field burning. So the incentive has just gone up for those of us in agriculture to be involved in these technologies and not doing our open-field burning.

MR. SCHWENT: Thank you. I didn't mean to interrupt you. Do you have any further questions or --

MR. WISEMAN: No. And that was my point, that this proposal or any proposal that the Commission comes up with should include the flexibility to make sure that we make the choice if it's that cross technology, if it's a mothballed plant, whatever it is, we make the best technological and competitive choice.

MR. SCHWENT: Thank you.

MR. REESE: Well, Vince, I'd point out, and I'd like Mr. Wiseman's

offer here, essentially, we did include in our considerations the reactivation of all of the mothballed plants, and under whose ownership and under what arrangements, we didn't even consider that.

We did talk about the possibility of a new plant. And I would say that in a four-year period it would border on the impossible to permit and construct a new plant.

MR. SCHWENT: But if he were take over one of your existing plants, bring it out of mothballs, then he's incorporated in your proposal already because you assumed all those plants were coming out of mothballs?

MR. REESE: Right.

MR. WISEMAN: And the gentleman's point is -- and that becomes the -- the permits become more valuable than the facility.

[Laughter.]

MR. SCHWENT: Okay. All right. Thank you.

MR. WISEMAN: Thank you.

MR. MASRI: I call Ed Wheless next.

MR. WHELESS: Ed Wheless, Los Angeles County Sanitation Districts.

And in response, the same as the last person indicated, I represent -- as the Los Angeles County Sanitation Districts runs two solid waste facilities. And we are not -- we are in opposition to this proposal, so it's not unanimous.

As far as the tax credits, I've been involved, deeply involved in tax credits. And I'm confused on the statement made that the possibility of landfill gas projects would not benefit from -- would not receive the tax credits if they received

other funding. Could you explain that, please?

MR. JUDD: It's my understanding, Mr. Wheless, that if state subsidies are received for this particular tax credit, is it a -- I can't remember the numerical designation of the tax credit, the Section 29 tax credits -- that the federal credit would not be available. In other words, that a state tax credit would substitute for a federal tax credit, for example.

MR. WHELESS: That's not my reading of the Section 29 law.

MR. JUDD: So you would be able to retain both the Section 29 tax credit and additional subsidy from the State of California?

MR. WHELESS: That's correct. And that's why some of the other proposals are offering that. They wouldn't give this thing up if it was through that. So I would suggest you go back and check Section 29 law because it does not say that.

It talks about funding of facilities, meaning the landfill itself. Now if you were to take the money and give it to the landfill owner rather than the generator, then the gas would not qualify; but the generator is separate from the owner, the facility owner.

MR. JUDD: That may be. We -- don't mistake that we don't mean to be hostile to landfill gas. The question arises as to whether landfill gas receives enough funding at this point not to need supplemental funds from the renewables fund.

MR. WHELESS: That leads to my next question, as why do you think that these technologies, any one of them, is more deserving of this than, say, the small municipal waste water treatment facility using biogas to generate its own load, or small landfills which have the same problems that all of you face?

MS. RADER: Well, I think I made one comment last week to the effect that -- and I think in all of our cases, there are industries that revolve around a particular technology. Certainly in the case of the wind industry, we have a wind industry and an infrastructure and a know-how and a technology that is completely unique, and it has only one application, and that is to generate electricity.

And what is happening in the wind industry is we are losing that infrastructure. And it will be very difficult to piece it back together at the end of the transition when market prices are going to be much more favorable.

And I don't see that same sort of industry know-how, infrastructure at risk in the landfill gas area. And maybe that's a misperception also. But it's not my understanding that the landfill technology is at risk or that there's any sort of industry infrastructure that's at risk during the transition period.

MR. WHELESS: I don't see how it would be any different. Certainly windmills are going to be continued to be applied all over the world. I mean I just don't see the difference at all.

MS. RADER: Well, we have existing California companies that are trying to manufacture turbines and that may or may not make it through this transition period. And if they go away it will be very hard to resurrect them later.

MR. WHELESS: There are landfill gas projects that have gone away already. There are others that could very well go away. And they won't be resurrected if they go away. I just don't see the difference.

MR. REESE: Well, let's take a try at it. We had no specific -- the biomass industry had no specific intent to exclude landfill gas. We don't know a

whole lot about it.

Based on our discussions in which we have concluded that if our fuel arrives at the gate, we can still handle it, burn it, boil the water, make the steam turn the turbine, get rid of the ash competitively.

We were hardpressed to see that in a landfill gas project, which does not have a fuel, solid-fuel handling problem, if the gas is delivered to the plant why it should not be able to generate electricity at market price. That was our --

MR. WHELESS: It's the size. It's simple that, the size.

MR. REESE: Well, --

MR. SCHWENT: In terms of our format again, please, we'd like to have the speakers confine themselves to questions of the participants here. We'll have questions of the landfill people later today, and we'll get a chance to go into some of these issues.

Thank you.

Barry Butler, I understand, has two questions.

DR. BUTLER: My name is Barry Butler from SAIC.

And in reading the proposal it said that you represent 90 percent of the renewable energy produced in California and that you're likely to be the producers of more energy in the future. And so if you got all that you requested in AB 1890, all but 18 percent, how many new megawatts of power would be brought on in the state of California over the next five years?

MR. REESE: For biomass it would be about 200.

DR. BUTLER: About 200 megawatts?

MR. REESE: Um-hum.

DR. BUTLER: Now you may not have to answer the question right now.

MR. REESE: Okay.

DR. BUTLER: I think that in terms of -- the thing I was trying to figure out was with that expenditure of money, how many megawatts would go on the ground.

MS. RADER: I think we made an estimate which I think we made at about 640 megawatts, something in that neighborhood, of new wind technology. I think that's in our -- it's in here somewhere. I may have the number a little wrong, but it's in here.

MR. SCHWENT: You're referring to repowers, Nancy?

MS. RADER: Yeah, repower.

MR. SCHWENT: And retrofits?

MS. RADER: Yeah.

MR. SCHWENT: But that essentially is replacing 600 megawatts or something close to that of existing wind --

MS. RADER: Yeah.

MR. SCHWENT: -- generation?

So in terms of net new gain it would be something less?

MS. RADER: Yeah, it would be something less in --

MR. WILLS: But I think --

MS. RADER: -- net new. But the new -- but those number of megawatts

are, in fact, all new technology.

MR. WILLIS: I think there's two ways to look at this, and I don't have the specific number for SEGS. One is amount of additional kilowatts produced, and the other one is amount of kilowatts that don't go away. So it's an additive, it's not a net, the way you're looking at it. It's an additive process.

DR. BUTLER: So what you're suggesting is that what we're doing is keeping the industry from eroding and then adding net capacity on top of that?

MR. WILLIS: That's right.

DR. BUTLER: I guess it would be instructive to see what those numbers are.

MR. REESE: Well, Vince, my quick answer was simply bringing back the mothballed plants.

MR. SCHWENT: Right. So it's actually no net generation over where you were several years ago when those mothball plants were in operation; is that correct, Phil?

MR. REESE: Right. But as of now there's about 215 megawatts operable but not running.

MR. SCHWENT: Okay.

MR. HINRICHS: Let me give you a little help, Barry, from the standpoint of geothermal. For the 145.8 million that geothermal is allocated under our plan and utilizing about 90 percent of that money for new projects, new projects in the ground, not bringing old ones back, that we will anticipate out of that process being able to finance and get somewhere between 150 and 200 megawatts of new

capacity in the ground.

DR. BUTLER: Okay. Good.

The second question I had was the assumption of consensus. I seem to -- I'm having a challenge with the definition. A consensus to me represented that you've brought all the stakeholders together. And this issue of wants versus needs, I mean what you said is that you needed more money than was available.

And what I thought you meant to say was that you wanted more money that was available. Because a need implies that there was some -- when the business decisions were made to go into this, that this money was going to be available. And the money is becoming available, so it's just now there.

So the question is, on the consensus issue, you know, my understanding of a consensus was you got all the stakeholders in a room and you didn't push stakeholders out until you met the money. That instead what you did was try to maximize something or -- you know, I've done this in land-use planning and other things.

And everybody, when you're a stakeholder, everybody is in the consensus. And so this proposal does say consensus, and it looks like it's a consensus of the existing generators only.

MS. RADER: Yeah. I think that's how we've presented it. It's the consensus of those who represent about 95 percent of the generation in the state, which I think is an accomplishment that shouldn't be underestimated.

We realize it does not include all parties, including yourself. But it is a consensus among the vast majority of existing renewable energy industry producers

in the state. And that's all we intend to convey by the word "consensus."

MR. SCHWENT: I think that's how we understand it.

DR. BUTLER: As long as it's not meant to be more than that.

MR. SCHWENT: I think that's how we understand it.

Thank you.

Les Nelson.

MR. NELSON: Les Nelson with the California Solar Energy Industries Association.

I'd like to ask the proposers what mechanism, methodology or basis was used to arrive at the recommendation for eight percent for emerging technologies under your proposal.

MS. RADER: I think, as you know, we started out feeling that given the needs of the existing industries, that most of the industries were comfortable, actually, with a much lower number.

And the reason we went eight percent is because the Union of Concerned Scientists said that they felt that that was a reasonable number. And so, in fact, we raised the number that we were going to put out in order to meet what a reasonable party thought was a reasonable amount for emerging technologies given the needs of the existing and more commercial technologies.

I can't say there was high science. But I think we did increase the number over what many of the people in our group are comfortable with. We did it to really reach out and put as much in there as we reasonably could while still meeting the needs of our industries.

MR. NELSON: Would it be safe to say then that rather than coming up with the eight-percent number based on a methodology, that it was an establishment of need for the existing renewable providers and a determination of how much could be then allocated to the emerging technologies?

MR. HINRICHS: May I make some comments? I think the whole scenario of negotiations associated with this ought to be out in the open unless you participated in them. We had eight people that were from the various industries, and it included Les to begin with. And we intended to negotiate a percentage for all industries. And we wound up with an 18-percent for the solar industry.

And then the determination was made by the solar industry that the emerging solar folks could do better than the 18 percent. And the existing solar trough people kind of kept their feet in both camps for a period of time, and wound up participating with us at the table at ten percent. That leaves eight percent.

And we can argue forever as to how much money the emerging technologies in the solar industry needs. And they certainly will have their arguments. But that's basically what happened. We had negotiations that fell apart on the solar side. And half of them stayed with us and half of them are on their own. And that's exactly what happened.

MR. SCHWENT: So as I understand it, the rationale for the eight percent is simply that's what was left over after all the existing technologies --

MS. RADER: No. I would really clarify that.

MR. SCHWENT: -- got what they wanted?

MS. RADER: I would say that we went to 18 percent in our

negotiations. And that was something that we were not comfortable with. And the reason that we stuck with was because the Union of Concerned Scientists, it was their opinion, and we respect their opinion that that was a reasonable number.

And so in order to meet their criteria, we left it at 18, even though we lost SCIA in our consensus. So I really wouldn't say it was left over. It was really -- because I can say that the wind industry would gladly have raised their number by a couple of percentage points.

MR. HINRICHS: Certainly.

MR. SCHWENT: Any more questions.

MR. HINRICHS: As we all would.

MR. NELSON: Thank you.

MR. SCHWENT: I've got some specific questions for the specific technologies. Let's dive into those.

With regard to the SEGS units. Page No. 12 of your proposal, you had -- in that proposal you propose that up to 25 percent of the \$54 million would be used for debt restructuring as a way, presumably, to make your industry more competitive?

MR. WILLS: Yes. We have a maximum of 25 percent of those funds could be used for debt restructuring.

MR. SCHWENT: Is debt restructuring paying off principal?

MR. WILLS: A lot of these plants were financed in the early '80s, where interest rates were 13, 14 percent and maybe higher in some cases of these facilities. So part of that would be maybe to take some debt out and retain cheaper debt.

MR. SCHWENT: I guess what I'm trying to get at is how do you get cheaper debt? Is what your intent there is that you pay down some of the existing principal balance in order to try to refinance the remainder?

MR. WILLS: Yes, you may refinance. Just like you refinance your house when the interest rates are lower. Interest rates today are much lower than interest rates were down there. So you may go through a buy-out of that existing debt to reduce your overall debt loan.

MR. SCHWENT: Right. But when I refinance my house I typically refinance all of the existing debt and maybe even take out a little bigger loan if I've got some additional equity in my house.

So are you saying -- how is it that you would need this 25 percent simply to restructure? Is that what you have to reduce your principal balance?

MR. WILLS: Yes. Well, or increase it with the lower interest rate. And you could take those additional moneys out and invest it back in the facility.

MR. SCHWENT: Okay.

MR. WILLS: And there's a lot of different ways that, as you know when you make the determination to refinance your house, you go through a lot of different gyrations. You're going to do whatever makes the most economic sense.

I can tell you that many of these facilities have very high interest loans. And it's very difficult in today's uncertain environment to go Bank of America and go get a new loan. That they are very concerned about what's going to happen.

MR. SCHWENT: How much were these proposed fixes and improvements that you've given us, a whole list of some 17 items here that you

propose to make improvements to the plants, how much would the combination of all these items -- what do you see you doing? What was that going to reduce your generation cost by, or do you think?

MR. WILLIS: A lot is going to be in efficiency improvements. And it's difficult for me to speak on behalf of the other plants because I don't know their economics as well as I know mine. So let's take Daggett for example.

We have deferred maintenance problems since 1991 when Luz went bankrupt, because Luz agreed to do a lot of performance warranties and provide free spare parts and technology assistance. And when they went out of business, that contract's as good as the paper written on it.

So we have quite a bit of deferred maintenance in wacking [phonetic] mirrors and AC2s, etc.

I can tell you that our generation has decreased about 25 percent from 1990 levels to today, so that we believe that through this infrastructure we can dramatically increase our output, which will get us an effective lower cost.

MR. SCHWENT: Since it's crucial that you be cost competitive by the year 2002, that's one of the main purposes of this, can you provide us with some numbers as to what your current generation costs are and what you expect -- how much you expect to reduce those generation costs through the kinds of O&M and other fixes that you've proposed here so we'd have some sense, as with the biomass proposal, that there is some numerical rationale to believe you will be cost-effective?

MR. WILLIS: Yes. I'm not prepared to do that right here, and especially

because we have nine different facilities, but if that's a requirement we can look at it.

MR. SCHWENT: How did you arrive at this allocation of 20 percent, 40 percent, 40 percent between the three different operating companies, just briefly?

MR. WILLS: Through a combination of mechanisms, much like we came here. Some contracts have had the benefit of SO4 contracts, some have not. Some have larger solar facilities and are a little bit more efficient than others. Some have smaller capacity payments with more need.

So what we did is we got the three groups together and sat around the table and looked at generation, looked at contracts, looked at specific issues that my technology, which is a little bit different than Harper Lakes technology has, and we agreed that that's a pretty fair allocation.

And also to give you a little bit of background, the three sites have worked together on a lot of numerous projects. And we have typically allocated cost associated with it. If we hired a consultant and various things, that's kind of the general rule of thumb that we used for quite a while on the appropriate allocation between the sites.

MR. MASRI: Let me follow up on that a little bit, Eric. You mentioned that whether a project has SO4 or not was one of the factors you considered. Does that mean that -- do any of these projects have SO4 -- are they eligible --

MR. WILLS: There would only be --

MR. MASRI: -- to receive any of this money here when they're still under the fixed energy price period?

MR. WILLS: Not eligible for any of this money while they have an SO4

contract. And all projects will be off. There's only going to be two that are still on in '98, and they come off the cliff right there in '99. So 1999, everyone's off the cliff; and 1998, seven of the nine.

MR. SCHWENT: So the Harper Lake plants won't start getting their 40 percent until 1999 --

MR. WILLS: Harper Lake has always had a Standard Offer 4s contracts. It's six and seven.

MR. SCHWENT: Which is?

MR. WILLS: Kramer Junction.

MR. SCHWENT: Oh, those two of the Kramer Junction plants. Okay. Okay.

As I understand your proposal, there's no plans to build any future new SEGS units in California certainly, I don't know about the rest of the world, from a public policy standpoint, why should the state be spending significant money therefore on a technology that does appear to have no future in California?

MR. WILLS: Well, I'm not saying we don't have a future in California. What I'm saying is in this interim four-year period, I think for bulk SEGS, 120-megawatt type power, I just don't want to put all their eggs out there because I don't know that that market is going to exist over this four-year time period.

What our proposal does say is -- and, again, this is important that Luz went bankrupt, all the new stuff that we've put in there is going to be used by that next SEGS plant. Kramer Junction, for example, has a three- or four-year program with Sandia National Lab, Department of Energy in improving the technology. And

a lot of the bugs that Luz was supposed to take out of the system through LS4 and just improvements, have been taken out.

The problem that we have now is we don't have the capital moneys to implement those improvements. We know what needs to be done. And we would use those funds to implement those things.

MR. SCHWENT: By the way, since you rely so much on this list of improvements, you've been working with Sandia, are there names of people at Sandia that you could provide us so that we --

MR. WILLS: Sure.

MR. SCHWENT: -- could talk with folks at Sandia and get some understanding of what's going on in their R&D program to date? That would be helpful.

MR. WILLS: Okay.

MR. SCHWENT: You also mention that you'd be happy to write proof of purchases and expenses that you've made out of these funds. Does that also extend to some evidence in terms of income and needs on these various plants, or is it just purchases and expenses?

MR. WILLS: I think our proposal talks about what we'd spend money on.

MR. SCHWENT: If you didn't have any of this money which SEGS units would cease to operate, which ones would be still alive in 2002, do you think?

MR. WILLS: That's a crystal ball that I'm just not able to --

MR. SCHWENT: The new ones, any of them? I mean would they all

be gone?

MR. WILLIS: I don't know how anyone can predict what the market price is going to be in the year 2002. If natural gas prices increase, which we think they will, some will be better off than others. But I don't have a clear answer for that. That's a crystal ball question.

MR. SCHWENT: But between now and 2002, in terms of surviving the next six years or so, if you didn't have this money, I assume some of the SEGS units would still have at least some fixed contracts for a few more years. Are there some units you think that could survive the next six years or would they all be out of business by 2000 or 2001?

MR. WILLIS: Yes, I definitely think some can survive. Do I think all of them are going to be out of business? No, no.

Again, I think the way to look at a SEGS plant, is you're buying your fuel cost upfront through the solar field. That plant can slowly degrade. And that's exactly what's happening in the SEGS plants, and that's what exactly will happen to these other plants if the energy price continues to be as low as it is.

Because basically your old car with a hundred thousand miles on it and bald tires, you know, you may have a flat, you go put a new tire on it, you still can run that thing. You just don't have to do all the maintenance. After a while it's going to come up and bite you, but what you're going to find is I think what you find in the wind industry and even the biomass industry. You are having a slow degrade of production. And that's what will happen to our industry, too.

MR. SCHWENT: As I understand it, because of the nature of the

operation of the SEGS plants, you get quite a high capacity credit since you are available a hundred percent of the time on peak. When do those capacity provisions expire in the SEGS contracts and how will that affect your economics when you don't get those very high capacity payments?

MR. WILLS: Our contracts are long-term contracts, and they go to the year approximately 2015 and beyond.

MR. SCHWENT: So at some point past 2015 do we have another problem with these SEGS plants when they don't get the high capacity payments any more?

MR. WILLS: Well, we've got to look at economic life. That's a 30-year plant. And the plants were designed for 30 to 40 years.

I would surely think that natural gas prices are going to come around by then, but to say you have a problem with the plant 20 years down the road, you might have other problems besides that.

MR. SCHWENT: But in the post-restructured world, the ability to deliver power on peak isn't rewarded as highly as it is in your current contracts; would that be a major problem in terms of income to SEGS units?

MR. WILLS: In the year 2015, you're asking me to speculate that --

MR. SCHWENT: Well, just any time. Any time for a new SEGS unit built after 2002, for instance, if it can't get the same kind of capacity payments that your current plants are getting because of their contracts, would that be a real significant problem in terms of the economics of a new SEGS unit?

MR. WILLS: I frankly think that if you're talking about California, and

as you know, we don't have any money allocated towards new, but I think in order for a new SEGS plant to be built in California it would have a higher content of natural gas and it would probably be base loaded.

MR. SCHWENT: There was a handout given out, some overheads, and if you remember this one that I think came out. I think it was the view graphs, or something. I have got a couple of questions on this.

On this view graph it shows SEGS as apparently intending to generate 956 gigawatt hours per year, 956 gigawatt hours per year. Your historical generation, according to the data in the Renewables Working Group Report, has been about 600 gigawatt hours a year. What accounts for the difference?

MS. RADER: I think the Renewables Working Group excluded the fossil fuel proportion, didn't it? And I think this probably doesn't. I think that probably explains it.

MR. WILLS: Probably.

MS. RADER: But --

MR. SCHWENT: That's about a 80-percent difference? Is that much attributable to the fossil fuel portion?

MR. WILLS: Six hundred and 900 is not 80 percent.

MR. SCHWENT: Well, this is almost a thousand versus 600. It's about a 40 -- you know, it's about a 400-gigawatt-hour increase over the 600 level. So it's about an 80-percent increase in that respect. Is that much attributable to natural gas?

MR. WILLS: Well, it says that it was -- it's 797 -- yeah, it's 800 versus 956. Because in the Working Group Report the 600 was 75 percent.

MR. SCHWENT: Okay.

MR. WILLS: Okay. So that's the other. And the other part of that is, I believe that number is net versus gross.

MR. SCHWENT: Okay.

MR. WILLS: So this 900 number is a gross number.

MR. SCHWENT: Thank you.

The last question in terms of SEGS is, just in terms of trying to provide some equity, in terms of the proposed allocations that you have, SEGS historically has generated something on the order of about three percent, three to four percent of QF renewable electricity.

Even under this chart, with your increased production, you're still only less than five percent of what the industry is proposing and to see as their future generation, yet you're requesting almost 20 percent of the existing renewable funds?

MR. WILLS: Well, what we're requested is ten percent of the overall funds.

MR. SCHWENT: Right. But since your proposal essentially represents the existing side of the industry, I'm just looking at the existing side, of the existing pot of 54 percent of the money, you're at about ten percent of the money. It just seems like on a proportionate basis it should be substantially less.

How did your group take that into account when arriving at the determination?

MR. WILLS: I think the industry consensus looked at the overall funds. And it was up to the individual technologies to determine what bucket they wanted

to put it in.

And we determined that the best use of our funds was to put it all in existing. So I don't think it's fair to then go back and say, "Oh, you're 20 percent of existing." You know, it's up to the technologies. I mean if they all put it in existing, we'd be ten percent again. So you've asked me to compare something I can't compare to.

MR. SCHWENT: Thank you, Eric.

Marwan.

MR. MASRI: I'd just like to make a brief announcement here, before we continue on. We will continue until 12:00 before we break for lunch.

But before that I'd like to call on Dan Kirshner, et al. We just received today a proposal from NRDC, EDF and the Sierra Club. They term it as a Compromise Proposal between what EDF had proposed originally and these entities and what this Coalition is proposing.

Now nobody has seen this proposal before today. We have made copies. There is 50 copies available outside. And what I would like to do is have these parties briefly introduce their proposal. And then the rest of the parties can pick up copies, maybe look at it over lunch, come up with questions for these people after lunch. But we still have the three-day period following this Workshop for parties to file comments on this proposal that just surfaced now.

Yes.

MR. JUDD: Just a question. It was our understanding that all proposals were due in last week to be presented to the Commissioners.

MR. REESE: May we come back next week with another proposal?

MR. MASRI: Okay. Yes.

MS. RADER: I have another question. And that is three days is a little bit short to be responding, and I'd like to ask for an extension. I know I can't provide comments by Friday on any proposal.

MR. REESE: You just gave them an extension for submitting it. How about an extension for commenting on it?

MR. MASRI: Okay. Well, I need to consult with my attorney on this.

MR. BLEES: We should talk it over with the Committee.

MR. MASRI: Okay. We will discuss this with the Committee and reach a determination before we allow it in.

Thank you.

MR. BLEES: Well, why don't we let them say their piece briefly.

MR. MASRI: Yes. Okay.

MR. BLEES: And apparently Peter can -- I think he was suggesting he could address the concern about the timing, as well.

MR. MASRI: Yes. Okay.

MR. PETER MILLER: I'm Peter Miller with the Natural Resources Defense Council.

And I want to begin by thanking you for the opportunity to present this today. I think probably the right place to start is by responding to the concern that the Committee did ask for all proposals at the last hearing. And my response is basically that we don't think this is a new proposal.

What we've done here is we tried to take what we think are the best aspects of the proposals that have been submitted and to try and craft a compromise proposal that brings together all of the interests that have been presented to the Committee. And that's what we have here.

And we would be glad to, if it's possible, take as long as it takes to get people's responses and try and incorporate concerns. We don't think that what we have is a final proposal, but what we have is a framework for crafting that proposal. And we'd appreciate it if people would treat it as such and give us their input.

In describing the proposal, I guess I want to start by saying that what I've heard is that there are producers, they are the industry gets up and they argue quite credibly that you need renewable producers to create a market. And that's true.

And there are marketers and consumer groups that equally argue, equally effectively argue, that you need consumers to create a marketplace, and that's also true. We need to have both consumers and producers. And this proposal is founded on that recognition.

We also recognize that there is considerable value in the industry proposal. And I want to highlight two points in particular.

One is that it provides an allocation across or among the different industry segments. That's a difficult thing to do, and that's very valuable.

The second is that the industry proposal recognizes that each industry segment has very different needs and different characteristics, and that each of those different segments may require a different approach. And we would like to -- our proposal tries to respect those advantages of the proposal, the industry proposal.

Shortcomings of the proposal that we feel exist are that it does not adequately provide resources to stakeholders who are not part of the proposal. And I guess that's not too surprising. Those interested that are at the table tend to ensure that their interests get represented and those interests that are not at the table may get shortchanged.

So what we have tried to do is to, starting with the industry proposal, try and add those other interests and give them adequate representation. And, in our opinion, those other interests are emerging resources, emerging technologies, customer incentives, the customer side of the market, and the competitive allocation of resources across new technologies.

We began by eliminating the RD&D and the marketing allocations, each of which was one percent. We feel that the RD&D can and should be funded from the RD&D funds that have been provided.

And we think that the marketing is generally the responsibility of marketers and other entities that are interested in doing marketing. While certainly there's some valuable work to be done there, there's not enough money to go around. And we thought that that was probably not the best way that those funds could be used.

In order to provide funds for these new needs that are not adequately represented, we reduced each industry allocation by an equal percentage. We spread the pain equally. And that's an attempt to recognize and respect the industry allocation.

And we took those funds and reallocated them to emerging

technologies, to customer incentives and to competitive allocation across new technologies.

We have numbers, and people will see them in the proposal. There's nothing magical about them. A couple of percentage points up or down would not, in our opinion, destroy the effort or the framework that we tried to create here. And we certainly are interested in people's response and feedback on what we've done.

We individually and collectively still have concerns about the details of the allocation mechanisms, both on the consumer side and on the producer side. We want to make sure that those are effective, that those go to support public goods, that they're used effectively and efficiently. So this is not intended to provide a blanket endorsement of all allocation mechanisms. It's more intended to provide a framework for the overall allocation.

But we do hope and believe that this approach may form a useful framework for a true consensus among all parties and an effective compromise.

And that's our proposal. And there's more details in here.

I don't know if you want to say anything else, Dan.

MR. KIRSHNER: I just want to reiterate this is a joint proposal of the Environmental Defense Fund, the Natural Resources Defense Council and the Sierra Club.

And I just want to say, you know, we're in a tough situation here. This is always a question of should you move. You know, it's usually the rule here is the person who moves first loses. And I just hope that's not what we're setting ourselves up here for. And we're hoping that some concessions will be met with

some reasoned concern.

MS. RADER: Can I just -- I hope that what your proposal includes is a rationale for why you're moving the funds the way you are and how that increases the production of renewable kilowatt hours and how it allows, for example, our industry to repower itself the way that we do.

I hope that what is in there is an explanation of how that can occur, because that is what we are looking for.

We're not looking to just move numbers around to make different parties happy. We have needs that need to be met. And we're willing to talk with you about how those can be met.

But I think it's just fair to ask you to include your rationale about what your goals are and how those mechanisms and numbers meet those goals.

MR. KIRSHNER: I say you've got three pages. You're not going to get every rationale in those three pages, but I think we all have something, in mind and we're happy to talk about it.

MR. MASRI: Okay.

MR. KELLY: Thank you.

MR. MASRI: We will consult with the Committee on this proposal and after lunch, hopefully, let you know what transpired.

Yes, please.

MR. JUDD: Excuse me. When you do consult with the Committee, would you do us the favor to assure that this late-arriving proposal does not become the centerpiece at the dinner party? That it's just one of a number of proposals and

it is not the agenda to which all of the rest of us respond any more than any other proposal is?

MR. MASRI: Okay. Well, I think we will break for lunch now and reconvene at one o'clock, and continue with this panel and then move on to the next one. Thank you.

[Luncheon recess taken from 11:55 a.m. to 1:05 p.m.]

MR. MASRI: Good afternoon. I'm going to take a couple of items here before we proceed with the questions of this panel.

And one of them, our attorney, Jonathan Blees, is going to convey the Committee's thinking or decision on the comments we received from NRDC and EDF and the Sierra Club this afternoon.

And then we will take, there's one person here who is representing fuel cells, it will only take a couple of minutes to bring him up to ask a couple of questions, and then we will resume with this panel.

So with that, John, would you, please --

MR. BLEES: We consulted with both Committee members. The Committee believes that the document entitled "Compromise Proposal" is really more in the nature of comments on or a refinement on an existing proposal.

And it is, of course, in the spirit of ongoing negotiation and compromise that the Committee has been encouraging the parties to engage in all along.

The Committee will consider it along with all of the other proposals and other documents that have been presented throughout the proceeding.

And the Committee does invite any participant who wishes to submit

written comments on this or any other document that we have by this Friday.

The Committee noted that the document is less than three full pages long, and much of it really incorporates material that has been submitted before.

And, finally, the Committee wanted to note that there will be a series of more formal hearings in January, and the participants will have at that time additional opportunities to make comments, criticize, et cetera, et cetera. So that's it.

MR. MASRI: Thank you.

So with that, if I may call Orville Moe, please. If you'll take that podium there, Orville, if that's all right.

MR. MOE: Thank you. I'm Orville Moe. I am president of Energy 2000, and we're involved in fuel cells.

MR. SCHWENT: Yes. Thank you, Mr. Moe.

We have just two questions. In AB 1890 it's clear that funds go toward renewable energy projects. Does your proposal include funding for all types of fuel cells or just those powered by renewable fuels?

MR. MOE: In our proposal I believe we wanted to cover both because we are able to use both. The fuel cells inherently operate from hydrogen, which is available from a variety of sources, ranging from solar decomposition of water to natural gas, which is obviously a nonrenewable. And it covers a wider spectrum, in our view.

And we would like to see it applied to as broad a spectrum as possible within the meaning of the law.

MR. SCHWENT: Also you called for a fund to be available for

demonstration projects. I don't know if you're familiar, but there is R&D funding that's also being made available through the same AB 1890. Would you think it's more appropriate for this to be done through the renewables portion of AB 1890 or through the R&D portion of AB 1890?

MR. MOE: Yes and no. Let me answer that question.

I attended yesterday's session on research and development as well.

And there was a good deal of conversation related to what is the public good and the fact that various demonstrations could be funded under those programs.

My concern in the way that issue was stated was that insofar as possible I'd like to see, and I think a lot of other people would like to see this amount of money, whatever it is, that's available for a limited period of time, used as efficiently and effectively and extended as far as possible.

And to some extent we would hope that some of that would be money that would be put into a fund where there would be low-interest loans available to a variety of emerging technology issues.

If so, then I think it would serve both the public good and the good of the community in terms of trying to get out that information.

And just another comment along the lines that you gentlemen are going to have to be facing as part of the Energy Commission.

When I listed out the types of public good things that were discussed yesterday, one of them was the capability to survive over a long period of time, which means: Going to renewable resources; improving the air quality, which is a noble goal; and, to some extent, waste disposal issues that were raised.

One of the problem areas, though, that probably is almost first on the list is lower-cost utility service to the customers. We've had a number of situations arise where the utilities are offering, in some senses, artificially low rates to consumers in this interruptible rate issue and that type of thing.

All we're asking for, I think, across the board in terms of what the emerging technologies people that are all here, are some sort of a level playing field.

And in your proposal, as I understand it, to establish an ISO that would both buy power from grid sources of various types and sell power, we would hope that part of the package would be to give us all an understandable rate structure that we can be either competitive or noncompetitive with, but this up one place, down another is really what upsets the apple cart for a lot of us that are trying to bring out new products into the market.

If I go to a client and he's paying 14 cents a kilowatt hour, and I say, 'Gee, I can give you power for 10 cents a kilowatt hour,' and somebody else comes back in and says, 'Oh, no, we can give it to you for 6 cents,' that creates a real uneven playing field for us.

MR. SCHWENT: Okay.

MR. MOE: And that's just another issue, but I'll close. Thank you.

MR. SCHWENT: Okay. Thank you. Well, leave the ISO to the ISO people.

I'd like to get into some questions for geothermal.

Again, we've got a large number of questions and a very short amount of time. So, again, if it's a question that you don't have an answer to, but you'd like

to submit an answer to us in the next three days or so, just please say so and we'll move right on.

So with that caveat, --

MR. MASRI: Excuse me a minute, Vince.

Just to remind parties here, if you have any questions on a proposal that is on the table at the moment, it's this Coalition Proposal, to get a blue card, fill it out and get it back to Carrie.

And this is true of every proposal that comes up. If somebody who's in the audience would like to ask questions, then go ahead and fill out the card so we can give you that opportunity.

And when the Staff is finished with this panel here, we intend to do that by two o'clock so we can have time to go through the rest of the proposal -- this is the major one here -- then I do have a couple more requests of the audience to ask questions of the panel. We'll go into those after we're finished with these questions.

MR. SCHWENT: Okay.

MR. HINRICHS: Vince, could I make a comment before we start to clarify something?

One of my constituents indicated that I had stated that the money that we have set up for the 90 percent is strictly for new projects. And then in my colloquy with Kathy Treleven, I indicated that if a project that the geysers were to be bought and there was no longer a contract, that in turn would be considered a new project.

And in our testimony we also state that an existing plant that no longer is on a contract with a utility would be eligible to utilize the Customer Rebate Program. I just wanted to be sure that that was understood.

MR. SCHWENT: Yes. I think that's clear.

In your first page of your proposal you talk about the challenge for renewable energy providers is financing new capacity. Are you saying that even with the balance sheets that some of the geothermal developers have that you would be unable to finance new plant capacity?

MR. HINRICHS: I don't think the word is "unable." The word is "challenging." And there's a question, I think, with everybody that's in this industry and looking into the free market that's coming of how projects are going to be financed.

And certainly the large companies that -- let's say our oil companies, our chemical companies that are historically financing new projects with balance-sheet financing, would be able to do this with their own assessments of the market, and they see that there's an opportunity to build something, they'll do that.

But the real issue here I think is in the case of renewables that are much more capital intensive than the competition. Financing capabilities that give you an edge in the ability to price your product may not be as available as they have been in the past.

There's no question that balance-sheet financing gave you a long-term situation -- not balance-sheet, excuse me -- project financing gave you a write-off over a long period of time and was basically able to price things at a lower price than

if you're on balance-sheet financing.

Balance-sheet financing generally looks at a pretty fast pay-off of that money. And I've done some of my own work. And it could be -- the difference between a balance-sheet financing and a project financing could be one and a half or two cents a kilowatt hour in your costing. So this is a challenge.

And one of the things that we've advocated in our positions are ways that would continue to provide that security there, that a project-type finance could be done.

The financing game of the future is very murky. And one of the things that we have built into our program here with long-term contracts for customer rebates that gives an incentive for that long-term contract and revolving loan fund, basically are those things that would give us a greater financing ability and therefore be able to compete in the market at the end of the transition period.

MR. SCHWENT: Okay. Just so I understand, I think you answered this question already, but looking on page 3, as I understand it, that what you're saying is what you need to make geothermal cost competitive post-2002 is to simply be able to build new and larger facilities, that it is apparently an issue of scale; is that really all there is? You don't need any fundamental new technologies?

MR. HINRICHS: There's no fundamentally new technology. Every plant that has been built, and I've been involved in this business since 1971, and every plant that's been built has been a little bit more efficient, a little bit more economic in operations.

And there have been some significant breakthroughs, particularly in

handling the brines of the Salton Sea, which are -- you know, it's got teeth in it. It'll just about eat anything up.

There have been stages of technological development that have caused it to be more economical. And we're pretty well down the scale already on that regard. The question now is the financing techniques to get the capital investment cost as low as possible. And we will be competitive at the end of this transitional period.

MR. SCHWENT: How big do you see these future plants needing to be?

MR. HINRICHS: A geothermal plant to be competitive in the market has to be at least 50 megawatts?

MR. SCHWENT: Fifty, five-o?

MR. HINRICHS: Fifty, yes.

MR. SCHWENT: Five-oh.

MR. HINRICHS: And if you're going before the Energy Commission, you pass the IQ test, and you make it 49.9.

MR. SCHWENT: What kind of cost is involved --

MR. HINRICHS: I'm sorry.

[Laughter.]

MR. SCHWENT: What kind of cost, relatively speaking, would a 50-megawatt plant cost these days, Tom? What are you looking at capital costs that you'd have to finance?

MR. HINRICHS: Oh, I would say that we're seeing -- when I was at Magnin [phonetic], we built those initial plants that came online in the late '80s.

And I think the last one came online in 1990. The capital investment in that was, oh, 2500 to \$2700 a kilowatt.

And we are pretty well below \$2,000 a kilowatt and approaching the \$1500-a-kilowatt category.

MR. SCHWENT: Okay. So a number somewhere between 1500 and \$2,000 a kilowatt?

MR. HINRICHS: Yes. That's with the size being in the 50- to 70-megawatt category.

MR. SCHWENT: Correct. On that basis, since one of principal features of your proposal is a loan program of approximately, I think a hundred and some million dollars, do you have a rough idea as to how many new megawatts of geothermal you think would come online?

MR. HINRICHS: I mentioned that when Dr. Butler was up. We would anticipate that that could support -- and it's a function of individual companies on how much they would utilize the loan.

I think we have stated in ours that a maximum of 50 percent of the capital investment in a project would come from the loan. But, assuming that, I believe we could see 150 to 200 megawatts of new capacity put together under this program.

MR. SCHWENT: Okay. A hundred and fifty to 200 megawatts.

You just answered another question which is what portion of the cost generation do you see coming from these loan programs. It's less than 50 percent; is that what you just said?

MR. HINRICHS: Yeah. Fifty percent would be the maximum. And, again, it depends on how many projects were to come into it. I'd have to do a little penciling.

But if you were looking at \$2,000 a kilowatt, a 50-megawatt project is a hundred million dollars. So this could give you a little bit of ballpark of what we're talking about here.

MR. SCHWENT: Biomass, in their testimony, gave us some examples of what a plant would cost in 1998 and the income and expenses roughly how it would break down between capital costs and debt service, O&M expense.

If you were looking at a geothermal plant, do you have any sense as to what part of your generating costs would be typically debt service for your cost of power, out of your total cost of power, generation?

MR. HINRICHS: I would say probably 60 percent, 50 to 60 percent would be debt service.

MR. SCHWENT: That high. That high.

And so you're requesting interest-free loans. So that would reduce that number substantially then?

MR. HINRICHS: That certainly would cut that financing cost down. And I can't tell you precisely what cents per a kilowatt hour that we would be talking of those numbers. Anybody that's got a calculator could figure out. I just haven't looked at it on that basis.

But it would do a couple of things. It would enable to overall financing cost to be lessened. And I think it would bring in a better opportunity for

conventional financing for the remainder of your project, too.

MR. SCHWENT: Okay. So since financing is critical to building these geothermal plants, this need for zero-interest financing, in order to build these next generation plant, how will that help geothermal transition to a point post-2002 where it can presumably compete with other nonrenewable technologies at market-interest rates? Is that the eventual goal?

MR. HINRICHS: Certainly. Certainly it is. And --

MR. SCHWENT: So how does a zero-interest loan help you get there? That's what --

MR. HINRICHS: Well, with one of the proposals that we've had in this is that that is a revolving loan fund and it keeps coming back. And so that you can look to almost a continuous source of funds on this basis.

But, looking at the cost of geothermal projects, the thing that I continue to point people toward is what were the results in the BRPU bidding. And there are some projects in there that I'm eminently familiar with that, with on a rolled-in basis, were bid in at five and a quarter cents.

And obviously that was put together maybe three or four years ago at this point. And we don't have a great deal of inflation, but it may be somewhat higher now. Let's say five and a half to six cents at this point.

So with the financing capabilities and the increased, let's say, knowledge there have been a couple of plants built since the BRPU time where there are some additional data available.

I feel confident that with this aid in the transition period and getting

new plants built through this zero-interest loan, that when we hit the, let's say, when the WEPEX market is reflecting the actual cost of power, that the geothermal industry will be able to build plants and compete on a head-to-head basis on that program.

This is maybe some hope on the part of additional plants being built. That gives you an additional capability of improving incremental aspects of the technology.

One of the other benefits here is that you're expanding off in an existing base on the resource side. There's going to be needing to be some work done on new resources that don't have plants there already, that will maybe take some additional help on the resource development side, but --

MR. SCHWENT: Now the BRPU bids that you mentioned, those were bid based on having to get money, I presume, at market rates, not zero interest or some subsidized rate?

MR. HINRICHS: That's right. That's right.

MR. SCHWENT: So that would reflect perhaps geothermal's cost without additional interest, subsidies or buy-downs.

MR. HINRICHS: That's right.

MR. SCHWENT: With regard to the zero-interest loan, it strikes us that it is still a fairly limited amount of money in terms of the number of megawatts. And because of the 20-year repayment schedule and not even a beginning to repay until, what, the third year of operation, I think you provide for, --

MR. HINRICHS: That's right.

MR. SCHWENT: -- that at least in the near term, by around 2002, 2003, there won't be a lot of repayments, will there, yet from the zero-interest loans.

MR. HINRICHS: That's right.

MR. SCHWENT: So there won't be a lot of that money that can be recycled on a very near-term basis, at any event, while it may go on infinitely.

And, with that, would it make more sense for the geothermal industry if they had access to, say, larger pools of money, state tax-exempt bonds that would get you a low-interest rate but which the bonding ability is much greater, where you could get hundreds and hundreds of millions of dollars worth of financing potentially? Would that assist the geothermal industry better in the long term?

MR. HINRICHS: It could. The zero-interest loan is an idea that's floated out there. And we may come back with a different mechanism on that. But the idea is having a bundle of money available that could assist in the financing end.

MR. SCHWENT: Are there any more criteria in how you would allocate these loans other than I think what's mentioned in the proposal is just you would try to get the most megawatts for the dollar among competing applicants and that no one applicant would get more than 50 percent of the funds; is that the limit of it?

MR. HINRICHS: Yeah, that's right. And what we visualize there is, let's say, a bidding process for the money that would indicate a dollar-per-kilowatt investment. Most geothermal plants, the operating and maintenance costs are very similar. And what you're really looking at is upfront capital investments.

MR. SCHWENT: You've also asked that these moneys be set aside outside of the control of the state with private money managers so that they can be reinvested and the interest would grow the fund. Do you know of any precedents where that's been done, where money that's --

MR. HINRICHS: I don't personally know. I've heard some mention of that. Actually Mr. Wyscoff [phonetic], who unfortunately is not here today, was aware of some funds that he was involved with that that occurred.

MR. SCHWENT: Okay. Perhaps you could provide us some more information on that.

MR. HINRICHS: I certainly will.

MR. SCHWENT: What about the split between rebates and loans? In the proposal it wasn't too specific. Can you give us a more specific number as to how you would see splitting loan funds versus rebates, since as I understand it the rebates would be available both, as you've mentioned, to existing as well as new plants? Whereas, the loans are presumably intended only for new plants, if I understand it right?

MR. HINRICHS: No. We had a proposed split on that and did not get unanimity amongst our industry. And I think really, as we've thought about it more, that not having that defined as to so much in each category may be the best way to go.

And that that gives the flexibility of putting together a package that would incorporate a customer involvement and also a portion that would be involved in assisting the financing from the standpoint of a loan. And give people

the opportunity to match those two things together.

And, again, you can have that same criteria of the amount of money coming out of a loan compared to the amount of capacity that is going to be put online to evaluate that, so that you could have a mix and match of the two.

MR. SCHWENT: Well, if this money is somehow turned over to the geothermal industry outside of the control of the state, who would be making --

MR. HINRICHS: That's a happy thought, isn't it?

MR. SCHWENT: -- this decision? Who is it that's happy? Who would be making this decision as to how to split the money between rebates and loans, an industry committee? Who would make this decision?

MR. HINRICHS: Oh, I think there's an oversight involved with a state agency that basically would use a criteria of the most capacity coming online for the amount of money coming out of the fund. I don't see the industry doing that themselves.

MR. SCHWENT: Okay. You mentioned that with regard to rebates you would like a long-term contract?

MR. HINRICHS: Yes.

MR. SCHWENT: That in order to get a rebate this marketer would have to be able to give the geothermal plant developer a long-term contract. How long is long? What do you need to finance these plants, do you think?

MR. HINRICHS: Well, we had in the initial draft a ten-year contract, which kind of fits in with the financing schemes. Some people feel that a five-year might do the job. Somewhere between five and ten years would be what I would

say.

MR. SCHWENT: Given the length of that contract, are there specific markets that you would anticipate would be able to give you a ten-year contract? Are these, for instance, industrial customers, munis or fledgling green marketing companies, or where would you see those ten-year contracts coming from?

MR. HINRICHS: Well, this is maybe where I am a little bit more optimistic than some of the other members of the renewable industry. I feel that sophisticated buyers are going to really have a desire to enter into long-term contracts even within this short-term market that we're having, just from the standpoint of diversity.

Our energy price is going to be dictated for a number of years by the price of natural gas. And we're already beginning to see some whipsaws in that. And that for anyone that has a large energy portfolio to manage, be it a marketer, be it a utility, be it a large customer, is going to want to have some hedges on that.

And I truly believe that they'll look to people such as wind and geothermal and biomass that have a control on their fuel price, that this whole thing comes together as a rolled-in cost.

And there will be a desire to put part of your energy in that type of form. And with a long-term contract, again, that fits with our needs for better financing because that helps in the financing.

And so I would visualize, let's say a geothermal project being developed and going out and looking for niche markets of people that are sophisticated buyers that enter into long-term contracts utilizing the loan fund, taking some risk of

playing some on the margin of what the WEPEX is, and put a project together.

Whereas, if you just look at going into the market solely, that's going to be a pretty hard pill to swallow.

MR. SCHWENT: So it sounds like you may see these contracts coming from existing large consumers of electricity, industrial users, et cetera, more so than --

MR. HINRICHS: Or cities.

MR. SCHWENT: Or cities.

MR. HINRICHS: A great deal of the geothermal resources are in the Imperial Valley. There's an irrigation district down there that has capacity for power. There's transmission lines to Palm Springs that has been trying to find other sources of power. So there are those kinds of opportunities. And then there's going to be large customers.

So I see, as I again, say sophisticated buyers that are going to be looking to the renewable industry for entering into some long-term contract, just for hedging.

MR. SCHWENT: But it sounds like you're not relying upon fledgling green marketing companies that would be simply in the business of aggregating customers or reselling green power?

MR. HINRICHS: Vince, I wouldn't mind at all if they had the capacity to provide that long-term contract and the ability to stand behind it.

MR. SCHWENT: Okay. One last question on the geothermal side. You seem to be primarily putting all of your eggs in the basket of new generation as opposed to these other technologies that are focusing more on existing --

MR. HINRICHS: Well, with that one caveat --

MR. SCHWENT: Right.

MR. HINRICHS: -- in the customer rebate. If you don't have a contract that's out there with an existing one you would participate in it.

MR. SCHWENT: Well, EDF and others have proposed a mechanism where the different established technologies would be competing with one another in order to be able to get these rebates or these production incentives that they would need to build new capacity.

How do you think geothermal would fair in such a multi-technology competitive market, do you think you'd be the low-cost provider?

MR. HINRICHS: I think we'd do quite well.

MR. SCHWENT: Okay. Is there any desire or thoughts to at such point that your loans funds eventually were diminished due to loan defaults or just eaten away by inflation or whatever that you'd need any further public subsidies, or is this seen as a "one shot should get the industry commercialized"?

MR. HINRICHS: This is the end of it.

MR. SCHWENT: This is the end of it.

MR. MASRI: I have one additional question while Vince is looking at his notes.

MR. SCHWENT: Go ahead.

MR. MASRI: On page 6 of your proposal, the second paragraph, under "Production Incentives," that first sentence, see that, "The application by an existing," I presume, "plant for the production of" --

MR. HINRICHS: We're talking of existing projects that want a production incentive.

MR. MASRI: Yes.

-- "most show the project's current needs and demonstrate how the payment of the production center will," and so on.

Is there a reason why you would not place the same requirement on the new plant applying for the loan funds since that is also a big subsidy? That is, present the business plan and demonstrate need and so on.

MR. HINRICHS: Well, I think from the standpoint of need, the Energy Commission's demonstration of need, I think, is a moot point as we move into this new marketing kind of thing of a person determines to enter the market, it's an economic decision. So when you're talking about new facilities, an economic decision is made that this can be in competition in the market.

And so how one would go about looking over someone's shoulder and say, 'Are you really sure you want to spend this money,' I recognize that in the case of utilizing money out of the fund, which this is all about, that only 50 percent of the project financing is going to come out of the fund. So there's going to have to be equity in conventional financing associated with it, too.

And it would seem to me with that caveat that project is going to be built only if there is a genuine capability of it being successful.

MR. MASRI: Well, you don't see a need for the project to demonstrate need for the funds?

MR. HINRICHS: Need for the funds or --

MR. MASRI: Right.

MR. HINRICHS: -- need for the capacity?

MR. MASRI: No, need for the funds.

MR. HINRICHS: Oh, you're talking about needs for the funds.

MR. MASRI: I think that's what you mean here in your statement --

MR. HINRICHS: Yeah. Okay. I was --

MR. MASRI: -- about the existing projects.

MR. HINRICHS: -- going down the wrong track when you talked about need.

MR. MASRI: That's all right.

MR. HINRICHS: I'm thinking of the Energy Commission site siting.

MR. MASRI: No, not that kind of need.

MR. HINRICHS: I guess the way that that would be demonstrated would be showing that, without the funds, the project would not be built.

MR. MASRI: So you would put the same requirement on a new project: To demonstrate a need for the funds as you would an existing project?

MR. HINRICHS: Well, I don't think so. I'm trying to follow your line of thinking.

With an existing plant coming in asking for a production incentive, I think there is very definitely a desire through this to show that through this production incentive that he's going to get that he will do some things that will make him competitive at the end of the transition period.

In the case of a new facility, the demonstration of need for the funds

would basically have to -- I would assume one would need to show the feasibility of the project and the projections of the performance of it, that is, that it is going to be successful.

And maybe that could be a criteria, that performance would be shown that it would be successful and be able to merge into the market with the funds and that, without the funds, that it wouldn't.

I can't imagine any other mechanism to satisfy that. I think what you're probably pointing toward is, is this facility already able to meet the market without the funds. And that's a good question. And may be there should be a criteria.

The real issue, of course, is what is the market going to be out there at the time that the plant comes on the line or what-have-you. And then that gets into speculation. And so you may not get a resolution on that.

MR. MASRI: Okay.

MR. SCHWENT: Two last quick questions, Tom. There is an issue you mentioned with the federal investment tax credit --

MR. HINRICHS: Yes.

MR. SCHWENT: -- and this below market interest rate financing may poison some of those credits?

MR. HINRICHS: Well, this is -- as Mr. Wysock indicated, a kind of heads-up. And certainly I know many people are concentrating on this. And, yes, that very definitely has to be looked at and a determination made that the -- any of these fundings don't eliminate some of the money that is available from Washington.

MR. SCHWENT: Well, assuming that you couldn't eliminate it and it does poison the federal credit, have you done any analysis to indicate at what interest rate or what amount of loan does it become a wash between whether you take the credit and give up the loan or vice-versa?

MR. HINRICHS: I did a little spreadsheet analysis myself. I'm an engineer by background, and periodically do that just to keep my sanity. That looking at a geothermal project that was a 50-megawatt project, a hundred-million-dollar investment, 50 million coming from the loan at zero interest, and not getting the investment tax credit, which is a ten-percent upfront investment tax credit, versus doing the whole financing on a conventional basis and getting the investment tax credit, there was a significant improvement in the economics and the internal rate of return on the project with the loan fund.

MR. SCHWENT: That was at zero-interest rate, Tom?

MR. HINRICHS: Yeah, right.

MR. SCHWENT: Okay.

MR. HINRICHS: Now there's all kinds of machinations that you can do on that. I would suppose that if the loan was only 20 percent and you lost the investment tax credit, it might be a break-even point. But obviously there will be someplace where there's a break-even point.

We really need to work together on all of this to be sure that we're not trading California dollars for Washington dollars.

MR. SCHWENT: And also one last question. On your production incentives for existing plants, if I understand this right, on page 8 you

say one of the criteria for these plants to be able -- the existing plants to get these incentives, that they have to demonstrate by the year 2002 they will have utilized additional funds for making plant improvements that will lower O&M expenditures by half-a-cent per-kilowatt hour.

MR. HINRICHS: Yes.

MR. SCHWENT: So these plants, if they can make that demonstration to you, they would get a one-cent per-kilowatt credit for four years, max, but potentially up for four years in exchange for which after that point in time they'd have a half-a-cent, ongoing, per-year reduction in O&M costs?

MR. HINRICHS: [Nods head up and down.]

MR. SCHWENT: Okay. Any more questions? Marwan, anybody?

MR. MASRI: No. I do have a card here from Mr. Alan Purves that would like to address questions, but I'm not sure to which members of these panels to question, but you're welcome to come and do it now.

MR. PURVES: Thank you. I'm Alan Purves representing Laidlaw Gas Recovery Systems. I'd like to congratulate the group on putting together a consensus. I'm impressed that when they only want 90 percent of the available funding, their members would actually agree with that proposal.

A point of clarification. There's been some questions on Section 29, the federal tax credit support. And I want to clarify, first of all, that landfill gas does not qualify under Section 29, per se. It qualifies as a biomass fuel.

And my question is: Does your proposal intend to exclude projects from the AB 1890 funding only if it causes a loss of federal funds, or would you plan

to exclude only projects which have taken the effort to qualify for the Section 29 funds, or those that qualify whether they are, indeed, applied for the funding or not?

MR. JUDD: The proposal, Alan, doesn't address that. At the time that proposal was put together, we simply did not have contact or a point of contact with those in the landfill gas industry, so we left that unaddressed.

MR. PURVES: It seems to me you want to exclude us on the basis of information you don't have.

MR. JUDD: No. The proposal does not do that.

MR. PURVES: The big problem I have with this proposal is that it allocates specific funding to specific industries. And while it's presented as a consensus proposal, I view that as somewhat exclusionary to future technologies which may demonstrate a need.

And the basic question I have is: How do you define need? How do you make sure that you don't give incentives to the highest-cost user when that highest cost is achieved through inefficiency?

MS. RADER: Well, I guess I would just say that we made our statement about what we think about whether landfill gas should be included. We don't really want to argue about it. We'll leave it to the Energy Commission to decide what's reasonable.

And, again, we're presenting this as a consensus proposal among those of us that are here. And we're not claiming that we represent everybody in this room.

MR. PURVES: My question wasn't really to landfill gas. It was related

to how you define need. Is it a question of the Commission accepts the work that you've done, and the fact that the allocation you've done is correct, turns over this 90 percent of 540 million to you and let's you allocate it as you see fit, based on need?

MR. REESE: Let me try to just give an answer to that, because we ask ourselves the same question a lot of times.

We looked for demonstrations of need that exist today. And I'll just give you a couple of examples. In the wind industry, the output has been declining because they haven't got the money, apparently, to keep the maintenance up.

In the biomass industry, plants are going out of business because they are not getting enough revenue.

The need was discussed among the four industries that are represented in this consensus. And it was defined as can't survive on today's SRAC, but at the end of the transition period, when SRAC is very likely going to be replaced by the full-going forward cost of electricity and be considerably higher, and with other certain adjustments which have been described by each of the industries to lower costs, we would be competitive at the then market.

There is a frequent thought expressed to me that there's something wrong with the biomass industry, that we can't compete and need support, and perhaps with the others.

And a large part of that answer is that the SRAC, which we are forced to accept as an energy price once we're passed our fixed-price period, is a definition made by the state some many years ago based only on gas. It is artificially low and is not sufficient to support a renewable energy plant. That's need.

But we see two things happening through this transition period: The SRAC going up to a true representative market price of electricity, higher than it is now; and the plants taking various steps to lower their costs.

The criterion that we applied was can't survive today, but can convince the others of us that we have a plan to become competitive at the end of 2002.

There was no intent here to support a plant for four years only to have it dying, or to support an industry.

MR. PURVES: Again my problem with the differential in the support is that it does artificially support some industries for that four-year period to the detriment of others who are then going to have to compete when the market does, indeed, become competitive in the year 2002.

MR. REESE: And as we spoke to Mr. Wills this morning, we had some thoughts on the landfill gas industry and no hard information that it was in need.

MR. PURVES: When everyone seems to admit that the AB 1890 funds are limited and if everyone got what they wanted it would be more than 540 million, I wonder if you can answer why you propose to pay an incentive for energy produced from the fossil fuels over that period, if I understand your proposal correctly, that the fossil-fuel portion of a qualifying facility would qualify for the incentive?

MR. SCHWENT: In the interest of time, I think that question was asked this morning. And there is an answer on the record.

MR. PURVES: Okay. The last question is most legal contracts that I've been involved with define bankruptcy as a cause for termination. Under your

proposal would applicants operating under bankruptcy protection be eligible for AB 1890 funding?

MR. REESE: It would depend on the kind of bankruptcy. If it was a reorganization, probably, yes. But we haven't thought that through.

MR. PURVES: Thank you.

MR. SCHWENT: Okay. Thank you.

I have just a couple of questions for wind and then a few for biomass.

With regard to wind, since the wind proposal hinges upon a substantial portion of the wind funds being used for repowering and retrofitting in order to maintain this balance between new versus existing, what assurances are there, Nancy, or what assurances can the wind industry provide that a majority of these funds will be used for repowering and retrofitting as opposed to other uses?

MS. RADER: Well, we have been thinking about that question because I was asked by someone last week. And I think there are ways that we can ensure or guarantee that whatever fraction that we need to guarantee go towards retrofits, repowers. And we've been thinking about a couple ways to do that.

One way would be to put in a trigger at the end of two years if we haven't met our target. Then the funds become only available to those projects that have been repowered. And there are other ways that we've been thinking of as well. So if that's a concern of the Commission, we'd be happy to develop those and report back to you with some ideas.

MR. SCHWENT: Please.

In terms of repowers and retrofits, I presume that this involves some

significant capital cost. And given that these incentives are only going to be available for, at most, four years, is there an issue of the ability to finance these repowers and retrofits by the industry?

MR. LYNETTE: I'll answer that. I'm Bob Lynette. I'm the Chief Operating Officer of FloWind, one of the wind companies out in Altamont and Tehachapi.

We're in the process right now of financing a repower project. In order to make it viable economically we've had to, what I call, cherry pick the wind sites, that is to say, pick the very highest sites so that we could make it financeable and provide the rates of return that the equity and the debt-holders want to have.

This adder that we're proposing, if we had that today I would have had no problem financing it. And it wouldn't have taken me six months to do that, because it's just enough to tip it over into financeability. And four years is a lot. And it's the first four years. And, of course, everyone knows on present value, it's the most important four years of a project as far as the financial community is concerned. And, yes, it is sufficient.

And I will tell you what it does. What this adder would do would be to bring into play probably 85 to 90 percent of all the wind-power projects in the state of California for financeability for repower.

MR. SCHWENT: Okay. Very good. Since the production -- you depend, of course, a big extent on this on getting the federal production credit for ten years. That expires in mid-'99.

So how would that interact with your proposal, Nancy, that if we don't

have enough repowers going on by midway through our four-year period, that then we skew the incentives more toward repowers? Isn't this an issue that would force all the repowers to want to be done by mid-1999 or lose the 1.65-cent credit?

Aren't the repowers going to have to be done in the first 18 months of this program? Or what happens to a repower? Is it cost-effective if it can't get the 1.65-cent federal production credit?

MR. LYNETTE: First, let me just tell you that the number one agenda item on the American Wind Energy Association's legislative agenda this year for the feds is to go back and try to extend that beyond mid-1999.

If it doesn't get extended, A, yes, it is -- first of all, it is an incentive to get going fast on repower. You bet. It's a strong incentive to do that.

We're going back in this legislative session. And we feel fairly good that we have a reasonable chance of getting the tax credit extended. If it doesn't get extended, it's going to be gamey in two or three years from now.

It's possible, depending on energy costs at the time, it's possible because we're still seeing -- the next generation wind turbine technology will be at about a 20-percent lower cost of energy than today's technology, which is, say, three years down the road. So we're starting to get into area where we can make up some of the loss of the federal tax credit.

And also if we had some certainty, which we've never had in this industry, of being able to repower X sites over the next several years, just certainty alone reduces cost by about 10 to 15 percent. Just that you know that you have that certainty.

And, lastly, that makes it, I think we'll be able to make it -- the better sites will make it through after the tax credit goes, should it go, is that in this industry, because we're renewable energy and because we're not conventional, it costs me a lot more money when I go to the bank to get money than it has for, say, a straight gas plant.

I mean I pay a lot more money to the equity-holder. That will come down two or three percent, perhaps as much as four percent over the next two, three years if we can stabilize this industry and prove it has lasting power.

I will tell you if we can't and if we let those sites go in Altamont, Tehachapi and Palm Springs, and let it dissipate, the cost of money is just going to do nothing but go up. And I can make a lot more money cost-of-energy reduction-wise by reducing my finance costs than my technology.

MR. SCHWENT: Okay. Fair enough. I have no further questions.

Are biomass representatives hiding around the corner? There they are.

MR. JUDD: Did you ask if we were hiding?

MR. SCHWENT: No, I knew you weren't hiding, but you did manage to disappear just when we needed you.

Is self-generated biomass included in your proposal? Are there any self-gen biomass plants, some of the sawdust burners, et cetera, are those included in the incentives?

MR. REESE: Only to the extent that they generate electricity for sale into the grid.

MR. SCHWENT: External?

MR. REESE: External, yes.

MR. SCHWENT: Okay. So there'd be a meter, whatever goes outside the plant --

MR. JUDD: Right.

MR. SCHWENT: -- would be eligible; anything used internally is not.

MR. JUDD: Parasitic load is deducted.

MR. REESE: Only what goes outside the plant on a meter into the grid.

MR. SCHWENT: Okay. Your one percent for research and development. Since we do have a research-and-development pool of money in AB 1890, what's the justification for putting the one percent in here as opposed to going to the R&D funds for that?

MR. JUDD: I think that the sense of it was that it's much more for immediate process improvements to improve efficiency and thereby marginally improve the cost basis than it is for R&D, in the sense that we understand R&D, which is for projects or processes which are not near commercial readiness.

MR. REESE: I think "research" is the wrong word, Vince, that you picked up on that. Doing an industry-wide fuel permit is not exactly research. And seeking out an industry-wide set of marketing opportunities for ash, that's more of a permitting problem.

MR. SCHWENT: By the way, the ash business, if you had markets for ash, how does that affect your bottom line, what kind of revenues could you get off of that ash in terms of improving your financial health?

MR. REESE: You've seen the bookkeeping where they put the number

in, then they put a set of brackets around it? That's the way it affects the bottom line.

I don't believe there's a single biomass plant in the state that has a positive revenue flow. The uses are land spreading for agricultural purposes, road base, sludge stabilization.

I may be wrong, but I believe every plant pays the majority of the costs for delivering the ash to the user.

MR. SCHWENT: So is it just a matter of --

MR. ELLERY: Let me just --

MR. SCHWENT: -- zeroing out -- what would it do in a cents-per-kilowatt-hour basis to your bottom line, if you could not have to pay to have that ash hauled away, you could actually sell it to somebody as a product?

MR. ELLERY: My facility does sell some of its ash we produce. Right now we're selling probably 20 percent. Unfortunately, it's -- 80 percent in the cost of disposal still exceeds the net profit back.

If I was -- to put it in perspective on our facility, if I could swing a hundred percent of the cost into a revenue generation, just on the same basis that I'm netting out now, it would amount to a million dollar total impact to our bottom line in kilowatts, you know, of 200,000 megawatt hours a year. So it's a half a penny, in round numbers.

MR. SCHWENT: Okay. Okay. So that's a substantial number then?

MR. ELLERY: Right.

MR. SCHWENT: I just wanted to get some cents to it.

MR. ELLERY: Which is why we put -- you know, part of the R&D is to really continue to further that research that define markets and uses for the material. But it's going to be uses with -- generally, although I ship stuff worldwide, we have a specialized product. It's not the typical biomass ash. But I think it represents the opportunity that's out there.

I mean there are opportunities, there are uses that could be profitable. But somebody's got to do a lot of research into finding those, literature studies and further testing. There's a lot of effort there that individually, as a plant owner, we're unable to perform. I mean the cost is just too prohibitive for me to invest that kind of time and effort and money.

MR. SCHWENT: Let me ask you about these mothball plants --

MR. KRAGE: Vince, if I could just add to that. I think a good range to put around that ash would be one to five mills, what Bob just described as five, --

MR. SCHWENT: The high end.

MR. KRAGE: -- in our situation, it's more like four.

MR. SCHWENT: Okay. Given that, according to the numbers you've submitted, for 1998 your revenues are three-quarters of a cent below your cost. Why would someone bring a mothballed plant back into operation if they're going to continue to lose money?

MR. JUDD: Let me get a start at that.

First, the purposes of the renewable fund itself gives some encouragement that the legislature is intent on preserving the external benefits of these biomass plants. That's a signal that had been absent for two and a half years,

when these plants were mothballed. So that is a good start there.

The second good start is the fact that the Cal/EPA study is underway, which is looking for ways to essentially drive down the cost of fuel, to bring these plants to market.

There is anticipation and hard work underway that mechanisms will be developed there to drive these down to market and remove the destabilizing influence that early deregulation proceedings had on decisions to close down the plants.

If the objective is to maximize the benefits, the external benefits, it argues that you have the maximum number of plants online to maximize those benefits.

MR. SCHWENT: Mentioning the Cal/EPA study, you seem to put a lot of reliance on that study resulting in reductions in your cost of fuel immediately, I mean 1998-1999. Isn't that true in your proposal?

MR. JUDD: No.

MR. REESE: No

MR. JUDD: Late in the four-year transition period we factor some effect in, but not in 1998-1999.

MR. SCHWENT: Well, you have a declining series of support payments, 1.5, 1.3, 1.1. So what's adding the extra two-tenths of a cent that you're dropping those support payments by every year?

MR. REESE: We think two things are happening: Possibly some earlier effects of the Cal/EPA work in lifting some fuel costs. And, second, SRAC going up.

MR. SCHWENT: Okay. So you're relying on SRAC going up, and maybe Cal/EPA?

MR. JUDD: Yes.

MR. REESE: Um-hum.

MR. SCHWENT: Okay. One last question, which is: Based on the numbers in the Renewables Working Group Report, the landfill gas industry, the biogas industry in general seem to produce a tiny fraction of the amount of electricity that the solid fuel biomass industry produces.

If it was felt by the Commission that those industries do need some support, do they find a home within your proposal? Could landfill gas, biogas find a home within your production incentives?

MR. KRAGE: Yes. Let me speak to that. As a listener this morning, I would just like to clarify again that it is --

MR. MASRI: Excuse me. I would just like to remind parties to state your name, please, for the court reporter?

MR. KRAGE: Chet Krage, Thermal Ecotech. We have a hundred megawatts of biomass in the state.

That I'd just like to clarify that the four technologies that got together to present this consensus proposal, this was a consensus among us. And it wasn't meant to extrapolate on others. And certainly there's a willingness to talk with others, and it's not meant to shut anybody out.

Of biomass specifically, our alliance, as has been pointed out before, is an alliance of owners, of owners' representatives, and it is the solid fuel biomass only.

We haven't attempted to represent anybody other than the solid fuel biomass.

So that, in answer to your question, Vince, I think that we, as the consensus group of these four technologies, would have to take that up.

MR. ELLERY: I know there's been comments about Section 29 tax credits. And let me just maybe talk about that a little bit, not generically about landfill gas, but those benefits and how they come into play.

And maybe one of the reasons why we haven't heard from the industry so far today, because I currently am working on a Section 29 gas deal. It has nothing to do with landfill gas. A Section 29 tax credit is basically allowed for alternate fuel production, of which gasification is one opportunity, of which biomass gasification is where the credit comes into play.

Okay. So the gentleman earlier today is correct. It's biomass. But it's not biomass combustion, it's biomass gasification.

There are many -- the definition of biomass in the Tax Code is very liberal, which is why landfill gas gets in there. Just to show you how liberal it is, tires are also defined in the Code as biomass, okay?

So the structure of those deals, however, requires several things. One is unrelated-party transaction between the generator of the gas and the user of the gas. So that the person generating it has to be a separate entity. It has to sell that gas to the company that's going to use it.

So typical transactions have what they call a generating company and a gas company. And it has to be a sale, and generally it has to be a profitable sale.

We're looking at that structure. For us it presents problems because,

when you're trying to generate more money, having a sale transaction in the middle is a problem.

But I think when you sit back and look at the landfill gas, what you're doing is cost-shifting from the landfill owner to the generating company, because that's the way most of those structures work. They cost-shift that money. They charge for the fuel, so the generating companies are paying for fuel. So you're cost-shifting.

And what we're talking about with AB 1890, with the EPA, is looking at cost-shifting back the other way. So I mean there's a little bit of problem there, to deal with. But we have, as others have said, we have not excluded them. We've just had no, in all of our conversations, -- for example, in the working group, the landfill gas presentation was that specifically. They do not need money for existing plants.

As a matter of fact, they sat there repeatedly and said they want only money going to new. So given their position in the PUC working group, that their existing facilities didn't need any money, it made sense that we weren't being contacted because they claimed they didn't need any money.

We'd be glad to sit down with them. We're ready and able.

MR. MASRI: I have one last question, to keep you here just for one more minute. This refers to page 3 of your proposal. You have some bullets under the data on the table there. And the third from the bottom, you would include contract buy-out plants that are eligible due to loss-of-capacity payment.

Now depending on the buy-out price, wouldn't that sometimes account

of the value of capacity payments and the price of the buy-out to the contract? So some of these plants may have already recouped that payment in the buy-out. And how would we then distinguish between those that would have recouped it and those that didn't?

MR. KRAGE: Okay. Marwan, let me -- a fact is that so far neither Southern Cal Edison or PG&E in any negotiations with biomass, solid-fuel biomass plants, have given any credit for the stream-of-capacity payments beyond the firm price energy period.

Now if that changes then there would be something to consider, but they've given no value for that. So the project would not have gotten any value in selling a contract for that stream of payments beyond the --

MR. MASRI: So to the extent that they do get some value for capacity in the buy-out, that would then be offset in these payments in your proposal?

MR. KRAGE: Yes.

MR. MASRI: Okay. Thank you very much. I think that's it for this panel.

And we'd like to call upon the representatives of the solar proposals, please.

MR. SCHWENT: Okay. If you grab a seat. We'll start off with some general questions about the SCIA proposal. Would Mr. Nelson want to field those since he made the original proposal, or whoever would feel comfortable?

In terms of general proposed questions, do you consider any solar technologies to be in the RD&D phase of development as opposed to the

commercialization phase? If so, then which technology should be considered RD&D as opposed to commercialization?

MR. NELSON: In our proposal we consider three technologies to be in the emerging phase: Photovoltaics, central station receiver and Dish Stirling. There are a number of other technologies, solar technologies, that would fall into the RD&D phase, although I'm not prepared to list them at this point in time.

MR. SCHWENT: Is that something you could submit to us, or --

MR. NELSON: Yes.

MR. SCHWENT: -- there's a list of such things?

In the proposal you talk about funds possibly available from DOE, the state of Arizona's proposed program, I suppose, munis, RD&D. Have you made any attempt to incorporate those into the proposals here in terms of how you would use those moneys if and when they were available?

MR. NELSON: In terms of other states possibly making money available, at this point in time there's no certainty that any other state will, in fact, make funds available.

The state of Arizona is now undergoing some deliberations to determine in the context of their restructuring activities whether funds for solar or other renewable technologies will be utilized. It's not clear whether that will, in fact, be the case.

And, in any case, it would be the development of the installation of technologies in the state of Arizona, not in the state of California or anywhere else.

The Department of Energy continues to make funds available that are

targeted at these technologies. However, their use is quite limited. And I'll defer, if you need further specifics on that topic, in regards to whether they're used for RD&D activities or commercialization activities.

And I think, quite clearly, under the auspices of the emerging technologies here in these deliberations, what we're trying to do is bring these technologies to a commercial state of readiness. And that's clearly not under the purview, in large part, of government funding.

And the last part of your question was in regards to municipals. At this point in time since the legislation does not specifically direct the municipals to undertake any activity that would concern emerging technologies, it gives them full leeway to do what they will with those moneys as long as they utilize them, I believe, in a general public benefits mode.

We have not made any specific recommendation beyond suggesting that any funds that become available from that source go back into the general renewables fund. We haven't even specifically suggested they go to emerging technologies unless so designated by the specific municipal.

MR. SCHWENT: I think in your proposal it calls for some low interest loans for central station emerging technologies. Have you given any thought to how this might affect federal tax credits and, if they do, what's the tradeoff? Would you rather have the federal tax credits with a low-interest loan? Is there anybody that can speak to that, or... That's fair enough. You don't have to. I just ask the questions, you know.

MR. NELSON: Actually I'll address it by saying that the issue of the

impact of these moneys on federal tax credit moneys is one that we're still exploring. We think we have a fairly good handle on it, but I don't believe we're at the table here today prepared to answer definitively on what we consider to be a hard-and-fast answer to that question. I think the jury is still out to some extent on what that impact actually is.

MR. SCHWENT: Since there seems to be fairly broad agreement amongst some of the other parties to these proceedings, other industries, that the AB 1890 funds alone are insufficient to even maintain the existing industry that we have, renewable industry in the state of California, why should solar technologies be allocated the full amount that they've requested to bring their industry to commercial viability?

MR. NELSON: Well, we believe that these technologies each have very compelling arguments regarding how these moneys can be utilized in market-based ways to bring the technologies either closer to or to full market commercialization at the end of this period.

We characterize this as the difference between subsidizing existing technologies in the hope that conditions will have changed enough at the end of this period to allow their continued operation beyond 2001 versus investing in new technologies that are on downward price curves that will clearly lead to commercialization. These moneys would be utilized to accelerate that curve and make that point in time arrive sooner.

MR. SCHWENT: I don't have any more general questions.

If you have any general, Marwan, I have some specific questions for

some of the proposers.

MR. MASRI: I don't.

MR. NELSON: Could I make a request that we have a time constraint on Ray Dracker, from Bechtel, who's wondering if you could start with that technology?

MR. SCHWENT: Easy enough, fair enough.

MR. MASRI: Excuse me, Vince. I'm sorry. Before you begin, is Steve Kelly here?

MR. KELLY: [Nods head up and down.]

MR. MASRI: Okay. This is one -- there is questions, I think, I believe you have for this panel here. I'd like to take some of those questions now, if that's all right.

MR. SCHWENT: Go ahead.

MR. MASRI: Okay. Because there may be some for the panel here.

MR. KELLY: Yes. I just have a couple of questions regarding the two proposals that were distributed at the last meeting as front and back to one whole presentation.

I was interested in knowing what's the total amount of funding for all the energies, the emerging solar, excluding the solar thermal, that you are seeking in your proposals?

MR. NELSON: The proposal makes a specific recommendation that 25 percent of the funds be allocated for that purpose, which would be 135 million.

MR. KELLY: So 25 percent for all the solars, because I was a little -- one

said, I think PV was asking for 96 million. So the other solars are asking for the difference between that and the 25 percent?

MR. NELSON: Specifically 10 million for Dish Stirling technologies and 30 million for central station technologies.

MR. KELLY: And that's based on an assumption of 540 million other than the 465 million that's in there now?

MR. NELSON: Correct.

MR. KELLY: Okay. And how many megawatts are expected to be in the ground by the year 2002 under this proposal, and at what price?

DR. BUTLER: Do you want me to do that?

We've estimated that this would put about 86 megawatts in the ground by 2002. And the price in 2002 for PV would be \$4 a watt -- or \$3 a watt; Dish Stirling \$4 a watt; and central station \$2 a watt.

MR. KELLY: So for the \$125 million investment you get \$86 million -- or 86 megawatts, new megawatts?

DR. BUTLER: Eighty-six megawatts in the ground plus an infrastructure, an industry that surrounds that. Most of that equipment would be built here in California.

MR. KELLY: And your estimate is that \$3 a watt in the year 2002 is based on the declining cost curve that you've projected out for the remaining five years?

DR. BUTLER: Yes. And to answer Vince's question before he asked it, that's manufacturing, production, efficiency and distribution.

MR. KELLY: Another question I had is what is the timeframe for full

commercialization? You use that term in your proposal. And I was just interested in knowing when you thought you were going to achieve full commercialization.

MR. NELSON: Well, "commercialization" is defined differently for each of these technologies. We're somewhat different, perhaps, from the technologies in the other proposals in that commercialization means can they compete at the market price for electricity.

These technologies, for instance, photovoltaics, and I'll defer to those representatives to answer this in more detail, but photovoltaics has a market at a price that's above whatever the WEPEX price ends up being.

And the question is: Can we get their faster and can we drastically expand the markets for the technologies utilizing these funds, and how much faster can we expand those markets.

So to answer your question, I would suggest that reducing the price of photovoltaics from \$6 a watt to \$3 a watt makes it much more commercially viable. It expands the market by a percentage that I, again, will defer to.

And I know that, again, without answering specifically for the other two technologies, the markets open up with price decreases.

MR. KELLY: I believe I heard someone mention of a payback period of 22 years for some of this stuff. Is that part of the calculation for the full commercialization? Do you achieve the period of payback over 20 years, then you're at that point?

MR. WENGER: I'm Howard Wenger. I'm representing the Photovoltaics Utilities Collaborative.

Last week I presented a chart that showed payback as a function of retail electricity price. And the payback really depended on what the retail electricity price is.

If it was I believe at 8 cents -- I have the chart in my briefcase, but I think if it was 8 cents a kilowatt hour, we're talking about a 15-year payback.

MR. KELLY: If the retail price for electricity is 8 cents?

MR. WENGER: The retail price. Because we can capture the retail price because we're putting these PVs on commercial buildings. They're on residential, --

MR. KELLY: Right.

MR. WENGER: -- so we can capture the full retail value. So that's the price that we're competing with.

MR. KELLY: So if the retail price is 4 cents, half of that, then the payback doubles; is that the way that's going to work? It'll be 30 years?

MR. WENGER: It will be more than double. It will be way more than double. If the retail price to the consumer was 4 cents a kilowatt hour, --

MR. KELLY: For energy, just -- we're talking about energy here.

MR. WENGER: No, no. I'm talking about the retail price that you as a residential consumer pay.

For example, in PG&E's service area, the second tier retail price is 13 cents a kilowatt hour right now. If it's 4 cents a kilowatt hour, which I sincerely doubt that's going to happen in California, the payback would be exceeding 40 years, I would say.

MR. KELLY: Can you translate that to an energy price? Let's assume

the energy price is -- the market clearing price for energy is 3 and a half cents, which is what a lot of people are talking about now, what is the payback period for your technology when you've reached full commercialization?

MR. WENGER: For photovoltaics, for the program that we're describing, which is customer-sided distributed PV, that question's irrelevant because we're not competing with the 3 and a half cents per kilowatt hour. We're competing with what that --

MR. KELLY: The full.

MR. WENGER: -- the full price, because we're connecting on the customer side of the meter. It's much like a demand side management application in that sense, in that we're reducing the then consumer's consumption and therefore capturing the full retail price of electricity.

MR. KELLY: But you're still connected to the grid, aren't you?

MR. WENGER: We certainly are. And for residential customers, there's a net metering provision that ensures that the customer gets the full retail price.

MR. KELLY: Of the total charge? So you get a discount on the distribution bill that the UDC would charge?

MR. WENGER: That's correct. The fully bundled price.

MR. KELLY: The fully bundled price?

MR. WENGER: Yes.

MR. KELLY: Somebody had asked earlier what the definition of "need" was for the calculation of accessing some of these funds. And I just throw out to you

what your definition of "need" is and how do you determine that?

MR. NELSON: Well, again, I think the answer is different for each of these technologies. Perhaps it's appropriate to look differently at need from the perspective of existing plants in the ground versus plants to be built.

Certainly the need in the other technologies represented here today is different for those plants that they're trying support and keep operating as compared to those plants which they hope to build with the funds.

That being said, what we're proposing here are supporting technologies that are not built today. I guess I would recharacterize the question, if I could, by saying that where would we be at the end of this period without this investment in these technologies versus with the investment in the technologies.

Obviously these technologies are not going to go away. The question is how much of a role they can play in California in the future and how much acceleration of that role can happen utilizing funds targeted at emerging technologies, which are, by nature of their definition, technologies that are not built today and will be built in years to come.

DR. BUTLER: I liken where we are now to what it was like when SO₄s were out there. The message is that the technology is close to being ready. With that benefit you could make it and bring it in, and fuel prices dropped.

In the times that we're in now -- and we don't characterize it as "need," I guess it's our desire to have this acceleration of our technology -- that what we would like to do is shorten the timescale by three to four years and into larger introduction of these technologies.

So we're talking about putting some 20,000 PV systems out there, 266 dish engines and one power tower. So those are the technologies that make up the 86 megawatts.

MR. KELLY: One final question. In terms of PV, you had described this as a DSM type activity. Is your technology eligible for DSM moneys at the PUC?

MR. WENGER: Not to our knowledge. Our understanding is that it's -- that the intention of the DSM funds are going to be used "pure" energy conversations, pure energy efficiency type measures, and PV wouldn't qualify under that definition.

MR. NELSON: I'd further say that AB 1890 specifically makes mention of photovoltaic technologies in connection with emerging technology, and makes no mention whatsoever either under the auspices of the renewable sections of the Bill or the energy efficiency sections of the Bill of photovoltaics being funded through efficiency moneys.

MR. KELLY: Okay. That's all I have.

MR. SCHWENT: Yes. Since Mr. Dracker needs to go perhaps we can ask a few questions about power towers.

Since the bill does refer to instate development and operation of renewables as being one of the objectives of the Bill, what is the instate potential that you view for power tower technology? I know your next plant, I guess Solar 3 would presumably be built here, but beyond Solar 3, what do you see the market instate for this technology?

MR. DRACKER: Well, of course, again that requires looking ahead to

what the marketplace will look like in general or in the year 2002, between the year 2002-2012 timeframe, during which time you'd hope to see that the benefits of the entire 1890 program come further into play.

Certainly we see that if the economy keeps growing and the needs for new capacity keep rising, -- everyone discussed where energy prices may or may not be in that 2005-plus or -minus timeframe. But we certainly see scenarios where new large plants, of the size we're talking about here, probably slightly larger, could be built on every couple of years through the planning horizon.

Again, just certainly the marketplace is going to determine what new capacity and new energy needs are. And I fully expect power tower technology to be responsive to what those emerging needs might be.

MR. SCHWENT: Now as I understand with Solar 2 you expect to get data to validate the salt system, the molten salt system, etc., that you've installed there. Is there any new technology that would need to be validated by a Solar 3 plant, this next generation that you're requesting funding to build?

MR. DRACKER: No. We would not bring new technology, per se, into a next plant that we'd fund under this emerging 1890 pot. Of course there will be scale-up. And there are always some issues with regard to scale-up, but we feel that the kind of scale-up can be done in a reasonably certain risk-free mode.

And we will be -- there were no heliostats placed in service at Solar 2, more or less. But there's an ongoing program to deliver a next generation of heliostats. And we expect that technology is in the process of being demonstrated and we'll bring that into play in the next plant as well.

But it's more scale up and an incremental improvement, but no fundamentally new technology would be necessary.

MR. SCHWENT: You mentioned on page 5 of your proposal that there are now emerging markets for bulk solar energy in domestic markets in the Southwest U.S. And you have a table there that shows that near-term markets for bulk solar energy being 500 megawatts in the entire U.S.

What's the source of that data and why is that going to be preferred over gas turbines at 2 to 3 cents a kilowatt hour? Where are these markets emerging, and do you have the data on that?

MR. DRACKER: Well, outside of California there certainly is the entire CSTRR Solar Enterprise Zone Program that is targeting a thousand megawatts of new central station bulk solar power over a 5- to 10-year timeframe. And that whole program is premised on it being a springboard to even larger development than that.

There is -- it's been alluded to several times, that a program in Arizona that is more or less emerging as a solar energy portfolio standard of some sort, or set aside, that could represent several hundred megawatts of new demand for bulk solar power.

And, as I mentioned, we expect some new markets within California in that sort of 2002-to-2012 timeframe as well.

MR. SCHWENT: What do you --

MR. DRACKER: And so I think in some -- of course, again, projecting future markets is a very risky proposition and difficult to do, but it's quite possible

that the 500-megawatt number could be on the conservative side as well.

MR. SCHWENT: Now what do you project your costs of generation will be after Solar 3, the next plant I suppose after that?

MR. DRACKER: The isolated solar energy piece, and again my note is from our proposal that we think that there's a lot of benefit to bringing central receiver technology in conjunction with high efficiency gas powered generation as well, but if you were to isolate the solar energy content, and again, depending on what value there would be in capacity, we feel that we could bring in power in 5 to 7 cent -- solar energy in the 5- to 7-or-so cent range in today's dollars during that time period.

In other words, following this program, an other activity we would envision doing in parallel.

MR. SCHWENT: The last question. I think you, I understand, envision some markets overseas for this technology financed by the World Bank and others as a potential carry-on market to sustain the technology, if you can get it commercialized; is that correct?

MR. DRACKER: That's correct.

MR. SCHWENT: Is the World Bank and other funding, is that financing? Is that grants? Is that loans? How does that work? How is that money that would be available?

MR. DRACKER: All of those areas of support would be possible through the World Bank and the IFC. But at present there is a global enterprise -- GEF program within the World Bank that is not guaranteed to continue beyond the

year 2000, but at this point Areides is likely, and mechanisms they have in place now are to provide grants for projects.

As there is a greater push to make projects independently financed, as opposed to state-government financed, those could evolve to -- I could envision them evolving to essentially loan buy-downs and other kinds of incentives to encourage the further development of projects.

But right now, for instance, the GF program has \$150 million set aside for bulk solar thermal products, targeting about a \$50 million grant apiece to each.

MR. SCHWENT: And, lastly, if you receive no support from AB 1890 what will happen to your commercialization plans? What's going to happen to Solar 3?

MR. DRACKER: I would believe they would be measurably slowed. We would be faced with the prospects of doing early projects, say, in developing countries where the market value of electricity is a bit higher, but where there are other risks that are far greater than doing projects here.

So I would see it as postponing the time of commercial readiness by two to six or so years, depending on how things played out.

MR. SCHWENT: Okay. Thank you.

Do you have any questions, Marwan?

MR. MASRI: Yes, I don't have any questions myself, but there are two members in the audience, in case they have questions for Mr. Dracker before he leaves, so I'd like to call upon them now. Phil Reese.

MR. REESE: I don't think mine are specific to him.

MR. MASRI: Okay. And, Nancy, do you have any questions for Mr. Dracker?

MS. RADER: [Shakes head from side to side.]

MR. MASRI: Okay. We'll hold on to these for now.

MR. SCHWENT: Okay. Going on to photovoltaics. I think you mentioned in your presentation that there is a program that has already begun and was successfully introduced into Germany. What were the lessons learned there? And can we just import those lessons instead of having to relearn them at public expense here in California?

MR. WENGER: Right. There's actually two international programs, the German program and a Japanese program that we have drawn quite a bit from in structuring the PV commercialization program in terms of lessons learned.

There's slightly different approaches in Germany and Japan. The lessons, the common lesson is that if you provide a market-based incentive that is oriented directly to the consumer, that there is a pent-up demand that will respond to that incentive. That's clearly demonstrated in both of the programs.

For example, in Germany a rate-based incentive was introduced in late 1994. In 1995 there were a total of a hundred thousand people contributing to this rate-based program in various cities and a hundred kilowatts of demand.

A year later there were -- it went from a hundred kilowatts to two megawatts, 20 times the amount in the previous year, and over five million people contributing to this rate-based incentive.

In Japan a similar curve has been evidenced. In the first year they have

-- in Japan, by the way, the program is very similar to the program that we're proposing, where they have coupled low-interest financing with a consumer-based rebate.

And in the first year I think there was two megawatts of customers signed up, in the second year, four, in the third year, seven megawatts. And presently there's a waiting list of 10,000 customers to participate in that program.

So what we've learned is that there is a market. You have to orient the incentives to the consumers directly. And we believe that the price points that the industry in California can achieve, there will be a significant demand for the product.

MR. SCHWENT: One of the key features of your proposal seems to be this need for a low-interest loan to help further reduce the cost of the PV systems to the homeowner. And I guess you would propose that the state or some entity would make these loans to these homeowners.

Doesn't this run the risk of disrupting the normal development of a market-based system for such loans, or are you going to upset the existing lending institutions out there by doing this or put them off on PV?

MR. WENGER: Actually what we've proposed is that at least two mechanisms with respect to the loan program be investigated. The first mechanism would focus on existing lending infrastructure and building on that. And that's stated in our proposal. We think that's very important because we want to establish a lending infrastructure that'll be available post-2003.

So one of the things that we'd like to see the AB 1890 funds used for is if

it's needed, is to buy down the risk in the interest premium to these existing lenders that are providing consumer loans for, say, energy efficiency improvements, and to jumpstart the lending institutions to get them exposed to photovoltaics and establish a track record for lending on PV.

And then the second component is to have a revolving loan fund situation, which is what I believe you were referring to.

We feel that establishing the existing or tapping or leveraging on the existing infrastructure is very important because we want to have something in place -- and a competitive lending situation in place -- after the transition has happened.

MR. SCHWENT: As I understand the proposal, this loan would be for a limited period of time, this is a revolving loan fund. You would try to sell these loans or you'd have money available. Is it your intent that these low-interest loans would go on forever, that the state would continue to make low-interest loans to PV customers? Or is there some point at which you cut it off?

MR. WENGER: I think with any of these emerging commercialization programs you have to make an assessment of where you are a year from now, two years from now and four years from now.

And I think that if there's an existing infrastructure in place that can make these loans, I would suggest that the money that has been recycled through the revolving loan program could be used for funding other emerging technologies, perhaps the PV wouldn't need that money any more.

That assessment would have to be made down the road.

MR. SCHWENT: So there may come a time when PV prices are low enough, enough banks are available to make loans, that we don't need to continue to do this as a state. And then that pool of money that was available would be available for some other use, you're saying?

MR. WENGER: That's exactly the point.

MR. SCHWENT: Since you're also attempting to do a revolving loan fund, and I think you requested \$28 million over a four-year period for this fund, --

MR. WENGER: Twenty-four I think what --

MR. SCHWENT: Twenty-four?

MR. WENGER: Um-hum.

MR. SCHWENT: Is that a magic number, since you intend to resell these loans, in any event? Could you do with less, or if you had 20 million instead of 24 million, would that hamper your efforts?

MR. WENGER: I think there is some amount of flexibility, but not much. I think that in order to make the recycling concept work, you have to bundle enough loans together to make purchasers, bond purchasers, interested in participating in the program and then rolling it over to the secondary market.

So I think there is a point at which it probably won't make sense from a revolving-loan fund tactic.

MR. SCHWENT: And the last question is in your buy-downs you propose to buy down the cost of 50 megawatts over a six-year period.

What's the rationale or the justification, again, of the 50 megawatts? Could it be ten megawatts, could it be 200 megawatts that you'd need? Why is it that

you think that 50 megawatts is enough but not too much?

MR. WENGER: We didn't chose the \$96 million number and then work backwards. We actually started with the megawatts. And what we -- the 50-megawatt number, there are a couple of bases for that.

One is that the net metering law in California is a 50-megawatt law. So we feel that we're maximizing the leverage and taking advantage of that piece of legislation.

The other thing is we felt that 50 megawatts in the way that we staged it beginning with three megawatts and then ramping up, was a large enough number to create the market stimulus and the commitment by the manufacturers and the distributors to take this program seriously and really market it and make it happen.

We also felt that in the way we staged the number of megawatts over time, that that was a reasonable capacity that could be met by the industry. And the industry could ramp up to meet that growing capacity over time.

I think that 50 megawatts is not a magical number, but a ten-megawatt program isn't going to do it over a six-year period of time. It's just not going to do it.

Should the number be a 150 megawatts? We think that's probably too high because the industry probably couldn't ramp up that quickly to meet 150-megawatt demand on an annual basis.

What we're trying to do is achieve a sustainable industry. And after the six-year period we're targeting 15 to 20 megawatts per year for grid-connected PV.

MR. MASRI: I have just two quick questions, Howard.

One is a follow-up on Steve Kelly's questions regarding whether PV is a

DSM or not. In your opinion does AB 1890 preclude funding photovoltaics under the Energy Efficiency Fund?

MR. WENGER: I'm not familiar with the energy efficiency language in AB 1890 to answer that. I guess probably the answer is: No, that doesn't necessarily preclude it.

But it's a battle that -- when I worked at Pacific Gas and Electric Company I actually tried to fight that battle internally in trying to get funds, energy efficiency funds for PV while at PG&E for PV systems, and it just did not work. It didn't work from the utility's perspective nor from the Public Utility Commission's perspective.

And we feel that the language in AB 1890 is very clear with respect to the renewables portion of development of photovoltaics. And we really don't want to hang our hat on the Energy Efficiency Funds.

Don Aitken -- getting back to the 18 percent of the AWEA et al. proposal -- felt there was justification and some confirmation from Don Aitken at UCS. Don in his proposal actually has recommended 150 million be allocated for emerging solar technologies, which is actually around 27 percent.

He has stated that he feels that 50 of that 150 should come from Energy Efficiency for PV, but that's certainly something that we -- if the Commission would provide assurances on coordinating that and ensuring that that would happen, perhaps we'd be amenable to it, but we feel that that really complicates the situation and is something that is close to being a nonstarter.

MR. NELSON: I'd just like to add that I've been reviewing the comments coming in on the Energy Efficiency Fund utilization. And I would say

they're probably running 75 percent in opposition to doing anything like customer-sided renewable generation utilizing Energy Efficiency Funds for that purpose. In fact, they're largely opposing the market transformation usage of those moneys.

That's not to say that that will translate into that not happening. But certainly the tide seems to be running in opposition to that.

MR. MASRI: And this question has to do with your Figure 3 on the CFH number here. That shows a cost drop for PV.

MR. WENGER: Page 4.

MR. MASRI: Page 4. Okay. I'm trying to understand what this graph shows. If there was no funding coming through this program, would the industry still continue along that cost curve and achieve \$3 a watt in 2004? Is that what the graph shows?

MR. WENGER: That's what it shows. If it follows the historic decline in pricing, --

MR. MASRI: Okay.

MR. WENGER: -- it'll achieve that without the funding in the 2004-2005 timeframe.

MR. MASRI: So your proposal, is it fair to say that your funding basically is the difference between whatever the market's price in those years and the \$3 a watt, and therefore is not really shifting that cost curve down and therefore accelerating the point at which the \$3 a watt is achieved?

MR. WENGER: We didn't show that on this curve because we didn't

want to complicate the curve. But the basis for the rebate level, if that's correct, is the difference between the projection of the PV price and this target price of \$3 per watt. That's the basis for declining rebate over time.

We do believe that the cost curve could be shifted downward as a result of the market pull from this program, but that's something that's very hard to project.

We have indications, for example, through the SMUD Sustain Early Development Program, they've managed to shift the curve. And we could project based on their experience, but we wanted to take a conservative approach and assume that the curve would just continue as sort of on a business-as-usual basis.

Now we built in -- we're suggesting that perhaps there would be flexibility. If the curve were to shift down quicker than we could, you could adjust the rebate level as a function of pricing.

MR. MASRI: That's really what I was leading to.

MR. WENGER: Yes.

MR. MASRI: So if there is some shift in that curve as a result of this program, that would reduce the amount of funding that's requested here and it would always be the difference between the market price and the \$3 per watt?

MR. WENGER: That's one methodology. I think that requires further analysis. Some in the industry don't like the prospect of that uncertainty, because they want to know what they can count on in terms of megawatts in the rebate level so they can incorporate that into their business plan.

Once you introduce this uncertainty, well, the rebates could be shifted

down as a function of the average selling price, and this sort of thing.

There's some in the industry that feel that that -- introducing that level of uncertainty would do more harm than good.

I think, personally, I'm for some flexibility, that if the curve is truly shifted and there's a tremendous demand to create it, then the funding should be scaled back or retargeted to some other area that needs it.

MR. NELSON: If I can just further comment and point out that this graph addresses just the reduction in price. It does not address the establishment of a competitive customer-based, market-based program that would result from the use of these funds, that would be in place once this whole program went away.

And that has significantly more -- or I wouldn't characterize it as significantly more, but certainly a substantial amount of value that it would accrue from the use of the funds, beyond just price reduction under the technologies.

MR. MASRI: Okay. I have, Phil Reese. You have a question for this panel?

MR. REESE: I'm Phil Reese, pretty clearly of the Biomass Alliance and owner of a biomass plant. But I should point out to the group that I'm also on the Board of Directors of Photovoltaics International, which is linear, concentrated manufacturing firm in Sunnyvale. So I have a keen interest in seeing to the success of PV as well.

My first question is really for clarity. I had in my notes that at the last hearing, Dr. Butler, I believe you said that the intent of this proposal was to kickstart the PV industry, which would otherwise require ten to 15 years for

commercialization; is that roughly what you said?

DR. BUTLER: Well, I think if you look at what Howard has put forward, the idea is that you're pushing manufacturing, the delivered system numbers up as a function of time. And this accelerates that, this buy-down difference.

You know, the PV industry has probably started and is going to carry on. The concentrated PV industry is a little bit behind the regular PV industry. So I think that this certainly would be a shot in the arm.

MR. REESE: I was speaking of the PV industry as a whole. A kickstart to accelerate its development.

DR. BUTLER: It would help, certainly, the technologies that are way down the commercialization path already.

The R&D stuff goes back to the federal program.

MR. REESE: Well, I guess given that background, I'd like to ask how in your proposal you would accommodate a couple of statements that were made last week.

The representatives from Siemens Solar got up and spoke. And after a commercial as to how big his company was, said that in the area of their solar receiver or solar cell manufacturing, they were currently in the red, expected to break even next year and be profitable thereafter.

Shortly after that the representative of BP Solar got up and said they were the number three manufacturer of solar cells in the world, and represented a company that had \$10 billion in assets.

My question would be that given the apparent assurance that the market is going to emerge, with that kind of industry support, how come those industries don't make the investment of only \$96 million to kickstart the industry?

I don't expect you can answer it right now. I'm posing it as a moot question for your consideration.

MR. WENGER: No. I would like to take the opportunity to respond to it.

[Laughter.]

MR. WENGER: I don't consider it a moot question at all.

I can't certainly speak on behalf of the manufacturers themselves, but I'd like to point out that there are profitable markets in the off-grid area. And that's primarily what's fueling and what has allowed these companies to exist to this point at all.

At 6 or \$7 a watt, the levelized cost of electricity today from PV on the grid is about, I don't know, 18, 20 cents a kilowatt hour. It would be hard to compete with retail rates at that level.

So what we're doing is we're bringing forward the point of commercialization six, seven, eight years with this program. We are kickstarting it. We are kickstarting the market. And we're just accelerating the time for when it's commercial to today, rather than eight years from now.

Now why these companies -- are you suggesting why don't they just forward price their technologies or more and go further in the red and capture the market share now?

MR. REESE: That would be one approach, yes.

MR. WENGER: That would be one approach. I think that's a fairly risky approach, and they decided not to do that, that they're losing enough money in the off-grid market as it is.

MR. NELSON: But Siemens Solar said they're going to be profitable next year.

MR. WENGER: Yeah, that's true. That's true. It's taken them a long time to get -- about 15 years to get to this point.

MR. NELSON: I would just add that one thing that you would probably not see these companies do is create, once again, the kind of commercial viable marketplace that this kind of a program would create for all the manufacturers, that would lead to a competitive market for each of the manufacturers, and hopefully lead to more manufacturers participating and getting into the black at some point.

So these companies have all indicated their interest in investing in the manufacturing capacity to meet this type of a program. Obviously they're not going to build that capacity if the need doesn't exist. So there's a lot of intertwined issues, I believe, that answer to your question.

MR. REESE: Okay. And I think for my last question, I would observe that your proposal is not a complete proposal. All of the others that have been submitted, regardless of what they say, do address all of the 540 million and how it should be allocated to everybody, whether or not anybody agrees with the allocations.

AB 1890 calls for a number of things, one of which is the support or

maintenance of the existing renewable industry and other things. I think it would be important in your proposal to explain that after you take out 25 percent, how the remaining 75 percent, in your view, at least, could accomplish the other objectives of 1890.

MR. NELSON: Well, and I think that's a fair observation. I guess I would put that in the same realm as my earlier question to the other panel, and that was: Where did you get to the eight percent? It's fair to you ask how do we make do with 25 percent.

I agree with you we haven't answered that. And I know I know I'm not prepared to answer that today. But I do agree with that as being a fair comment.

MR. WENGER: Well, I'd like to weigh in on that. And the umbrella SCIA proposal does make an allocation for existing renewables at 50 percent, I believe, and felt that it's up to the existing plants, such as yourself, to figure out what to do with that money. And then 25 percent would go to new and 25 percent to emerging. That's the proposal that's on the table.

We felt that instead of designating a certain amount of money for biomass and wind, we let you work out what you need.

And our focus really has been on what do each of these technologies -- I'm speaking on behalf of PV, and the others I believe would agree, that what do we need to achieve commercialization? That's been our focus.

And it's not how do the percentages stack up and negotiating on, is it eight or 14 or 22 percent. It's been: Well, this is what we need to make this thing happen to comply with the intent of the legislation.

DR. BUTLER: The other thing is in our proposal we've talked about the market-driven approach, so we have put down numbers for each of the technologies. However, as Howard pointed out, if we're unsuccessful in developing actual projects that can be financeable under that, then the monies won't get spent. I mean the power tower -- it's not an entitlement.

If a financeable package isn't available that will work, then that money probably would be reallocated. And we think that's a reasonable thing to do, not only for us but for you. Rather than to try to determine the amount now, determine the mechanisms whereby this money can be competed for, separated in ways that will keep the boundaries so that the boundaries that AB 1890 set aren't violated, but that within the slice, none of the numbers on these pages are entitlements; they're estimates of what we think.

MR. REESE: Well, you understand I'm trying to help you by giving you a heads-up to some questions that are bound to be asked.

And my final one would be to --

MR. WENGER: And we thank you for that.

MR. REESE: -- to ask you to spend some considerable effort in, I guess it would be comments on your own proposal, to -- really I guess the word is "justify" the \$96 million for 50 megawatts as contrasted to the \$491 million that the renewables industry is asking for about 3500 megawatts. It's a difference in ratio there.

MR. WENGER: That's 3500 megawatts of new capacity?

MR. REESE: No, no. Of existing renewables --

MR. WENGER: Yes.

MR. REESE: -- which the industry is asking 491 million.

MR. WENGER: I think it's a real apples-and-oranges kind of comparison when you start talking about megawatts. We are talking about 50 new megawatts. We're not talking about retrofitted megawatts or -- I don't want to get into that.

But I think there are other criteria for judging the success or the intent of commercializing a technology. And it's just not on the basis of megawatts.

It's the infrastructures, the jobs, the economic development. It's the fact that 20,000 PV systems will be out in the marketplace. It's the recognition of renewables, and putting it in people's face. It's all of these things that add up to the criteria.

Basis of need -- getting back to Steve Kelly's question on need -- that's what has to be weighed in this legislation and in the evaluation of the legislation and the carrying out and the implementation of it, is what's in the best interest of the public.

And I don't think that megawatts necessarily -- dollars per megawatt is necessarily the absolute criterion.

MR. REESE: You may be right. But don't get yourself sandbagged by offering jobs and other benefits at the expense of those same characterizes from the existing renewable industry.

MR. WENGER: Point taken.

MR. SCHWENT: In the interests of time, is there another question,

Phil?

MR. REESE: That's it.

MR. SCHWENT: Thank you.

MR. MASRI: Next we'd like to go on to Nancy Rader, who has a question for this panel.

MS. RADER: Thanks. I had a question related to your comment about net metering, because you indicated that if you reach your goal of 9 cents per kilowatt hour by the year 2004, that that will be competitive with retail rates and that that assumes net metering in order to avoid the need for storage to offset all the retail consumption.

MR. WENGER: Right.

MS. RADER: But the net metering law expires once 50 megawatts, once your goal of 50 megawatts is reached.

MR. WENGER: That's correct. On the residential side, that's correct.

MS. RADER: So it requires the extension of the net metering law in order to be cost-effective.

MR. WENGER: It might require that. But that's not necessarily true for all markets and all customers.

We think that net metering really comes into play with larger systems. If you have a small 500-watt PV system, it doesn't even come into play, because all that PV power will be used to offset the customer's load. So you don't even need net metering in that case.

For a commercial customer application, you can put a hundred kilowatts

on some buildings and none of them will ever see the grid, in essence, you're net metering.

So it may or may not be the case that that legislation needs to be extended. Certainly that's not the key element to success for this program.

MS. RADER: But in order for a retail customer to offset all of its retail kilowatt hours, --

MR. WENGER: Who says that --

MS. RADER: -- you need to --

MR. WENGER: -- any customer wants to offset all of their kilowatt hours?

MS. RADER: Well, in order to be cost-effective, if you're trying to compete with 9 cents a kilowatt hour, you need to offset all of your 9-cent kilowatt hours.

MR. WENGER: Oh, no, no. You just offset any portion of it. It's like putting in an energy-efficiency refrigerator. You're just offsetting some of your demand, and all of that's at 9 cents or 12 cents, or whatever the prevailing retail rate is.

MS. RADER: Okay. Well, I'll let that go.

You've made a statement a couple of times that 50 megawatts does it, ten megawatts doesn't it. Does that mean that the eight percent that we've allocated to PV is just wasted and we should have just reduced that to zero?

MR. WENGER: No, it doesn't mean that at all. But I appreciate the attempt at characterizing our proposal in that way as sort of an all-or-nothing --

MS. RADER: Well, you've done yourself that several times, that's why I'm wondering whether --

MR. WENGER: No. We, in picking up in some of the language that you have in your proposal, Nancy, we feel that there's a minimum amount that is required that will make the plan meaningful. And we think that at ten megawatts you're pushing the edges of something being meaningful.

MS. RADER: Ten megawatts is -- the national capacity is now 30 megawatts, isn't it, so ten megawatts is still a pretty --

MR. WENGER: No, no. The national capacity is 125 megawatts per year.

MS. RADER: Production?

MR. WENGER: Production.

MS. RADER: Per year?

MR. WENGER: Per year.

MS. RADER: That's not what I've been reading.

MR. WENGER: Absolutely. It's a 120 -- the photovoltaic module manufacturing capacity is a 125 megawatts per year.

MS. RADER: U.S.?

MR. WENGER: Oh, U.S., no. Not U.S. Not U.S. That's worldwide.

MS. RADER: Yeah, okay.

MR. WENGER: U.S. is -- well, Siemens alone is over 30 megawatts per year. So U.S., I'm just guessing, or estimating, is probably 50 or 60 megawatts.

So in California with Siemens or BP in a 10-megawatt facility, there

would probably be -- and the others, PVI, the board that Phil sits on, we're probably talking around at least 40 megawatts per year in capacity in California.

MS. RADER: Okay. All right. That's it. Thank you.

MR. MASRI: Okay. I think that's all the questions that we have for this panel, so we thank you very much.

At this point there are two questions of the Staff. So we'll be at the other end now of questioning.

Bob Judd of the Biomass Alliance. Is he here? Okay.

First I'd like to say that there are two questions here. One relates to the market agent proposal, and that's by Phil Reese, we'll come to that next, and the one by Bob Judd.

It says on the card here, "CEC's triage proposal." Again I'd like to repeat we have no proposal in that regard, but some options and ideas for you to consider. That's how we characterize them when we presented them.

So with that caveat we'll be happy to respond to your questions.

MR. JUDD: Thank you, Marwan.

"Concepts," I think, is the word used on your paper.

MR. MASRI: That too. Anything about a proposal.

MR. JUDD: You know, in the interests of time, I'd certainly be willing just to submit written comments on the concepts that are there.

It's an intriguing idea, really. It's probably the most tantalizing idea that's been put on the table. But perhaps ultimately the most unworkable as well.

And we have some reasons to think that because it's an idea that we

investigated ourselves early on. And it leads, in the end of the papers, you know, toward a bid process. And it seems that the outcome of the process, the low bid wins the subsidy process, those who need it least will, in general, win.

So it seems to be a bit upsidedown and it seems to be absolutely, by far, the most intrusive micromanaged approach to getting to a result that might be quite interesting. So it's a big of mixed blessing. And we would like to express ourselves in written comments that you might consider rather than take the time to go through it here today.

MR. MASRI: That's fine. We look forward to receiving your comments.

MS. DAVIS: I have something I'd like to say.

MR. MASRI: Well, this an answer-question session, --

MS. DAVIS: Right.

MR. MASRI: -- so I didn't take any question, in Bob's mind. But go ahead, Cheri.

MS. DAVIS: Yes. Well, I would just like to clarify something. I want to make sure that --

MR. MASRI: Cheri Davis, introduced.

MS. DAVIS: Cheri Davis. I would like to distinguish between the triage idea, the triage concept, which will be a goal that we're shooting for, versus the different ideas that were just -- that we're putting forward for accomplishing either allocation, technology allocation or distribution.

And so when you submit your comments, I hope that you'll be

distinguishing between those two things as to whether the whole triage idea is not workable or whether the specific proposals or specific -- not proposals -- specific concepts are not workable.

MR. JUDD: Could I ask just -- I will give you a question, actually. It's referred to in your draft as a CEC Staff -- Staff is made up of a lot of divisions and such here. Can you tell us any more about the genesis of the proposal and whether it's been endorsed by the Commissioners?

MR. MASRI: I'm sorry. Which one are you referring to now?

MR. JUDD: The concept of the CEC Staff?

MR. MASRI: It is, as we characterized them, these are Staff ideas, that we thought none of the proposals that we saw today incorporated any of those ideas. They are not endorsed by the Commissioners, as far as I know, at all.

MR. JUDD: Okay. Thank you.

MR. ELLERY: Bob Ellery for United America Energy. I guess a follow-up to Bob's comments on the triage, in looking at, I guess, the biggest problem that I had was that AB 1890 is about deregulation, and triage seems to be about re-regulation. It seems to me you're regulating -- trying to regulate the renewables industry. And I thought the whole concept of AB 1890 was to deregulate the industry.

So I guess that was the biggest hurdle I haven't got over yet, so I just wanted to make that comment.

MR. MASRI: Yeah. We didn't see any question again. We welcome your comments. I think we see it differently. But, again, your comments welcome

on the record. Put it on, if you like.

MR. ELLERY: Sure.

MR. MASRI: We'd be happy to consider that. Thank you.

The next question is from Phil Reese, and it has to do with the CEC market agent proposal.

What I'd like to say here is the two Staff persons who came up with that idea are not available today. We would like you to submit your questions, read them into the record, and we'll do our best to have Staff respond to you by Friday and file that response into record.

MR. REESE: Do you want me to read it into the record rather than --

MR. MASRI: Yes.

MR. REESE: -- just hand them to you?

MR. MASRI: Well, either way. Whatever you feel comfortable with.

MR. REESE: I think the audience prefers me to hand you the written questions.

MR. MASRI: Yes. Fine. All right.

[Laughter. Mr. Reese hands document to Mr. Masri.]

MR. MASRI: Next we'd like to call on Jim Kennelly, representing the Counties of Orange and Sonoma and the City of Sacramento and the NEO Corporation.

MR. SCHWENT: Regarding your proposal, first of all, why do you propose the California Alternative Energy and Advanced Transportation Financing Authority to run the proposal rather than the CEC?

Have you talked with the people over there? Do you understand the nature of that authority and their Staffing? What's the genesis of that suggestion?

MR. KENNELLY: We have talked with them during the PUC working group, and actually received a letter of interest from them, so we know that they can do it.

The proposal also says that any qualified agency that would want to do it could do it.

Now, Vince, if I could, for a moment, since I'm going to have to leave here shortly, it's so lonely here, and there are some others that said they would support this, and they may want to take off here or not --

MR. SCHWENT: Oh, okay.

MR. KENNELLY: -- when I leave and answer your questions.

As you noted, the proposal we've had keeps evolving every week. And it's now down to basically a pure CTC rebate. And on Saturday I faxed that to marketers to the three utilities, to a couple of developers, to a couple of the environmental organizations. And we just haven't had time to talk yet. This went out on Saturday and we're here today.

Two of them did come up today, though, and say "We'd be interested at least in the concept of the CTC rebate as a pure way to handle this."

So if it's all right with you I'd ask them to join me here, and I'll try to carry on here until 3:30, anyway.

MR. SCHWENT: Well, that's fine. I'm not will sure our questions are going to be relevant because the document we're working off was your submission

of last week, dated November 22nd.

MR. KENNELLY: Well, that isn't relevant. The one I sent to you folks got here on Monday.

And the people I had asked to join us, said they would care to do this, would be Laidlaw and the L.A. County Sanitation Districts, if that's all right with you.

MR. SCHWENT: Oh, okay. Yes, --

MR. KENNELLY: Probably your questions, we could still address them to this -- it's just a further refinement of what we've been talking about all along.

MR. SCHWENT: Well, it's definitely getting shorter, but I have to apologize because the first time that we've seen it was laid out here on the counter this morning, so --

MR. MASRI: It did get here yesterday, but we did not get a chance to really study it thoroughly yet.

And does this supersede your prior one or, as you just said, it adds to it?

MR. KENNELLY: It's just further refining it.

MR. MASRI: Okay.

MR. KENNELLY: Vince hit it. We've gone from 12 pages to five. And after we talked to some of these people, it gets to three.

MR. MASRI: Okay. Well, you can tell us if some of the questions no longer apply then, given your latest revision.

MR. KENNELLY: Or we can answer relative to the program.

MR. MASRI: Okay.

MR. SCHWENT: Let me just ask sort of one generic question then.

In your November 22nd version it struck me that you are fairly similar, at least it seemed to me, in terms of this proposal of EDF in that you wanted to have a bid system, production incentive payments, all technologies competing together.

Now your proposal may have changed significantly since then. Am I mistaken, do you feel fairly close to the EDF proposal? Would you endorse their type of proposal? Or perhaps you'd probably want to characterize how your proposal is different from theirs?

Maybe that would be useful for us.

MR. KENNELLY: Sure. And I think we can answer that based on what we have, even though you haven't seen it.

First, up until today, yes, we would have gone along with the EDF proposal. Theirs has gotten a little more complicated. I haven't had a chance to talk with cities and counties about it.

However, to answer your question, we aligned with them during the many months that the working group from the PUC labored over these issues. And they were interested in a competitive, market-driven approach, which was their surcharge. And we subscribe to that, and we do today.

And, in fact, I'd have to say, to be sure it's on the record, the Boards of Supervisors at Orange or Sonoma, or the City Council of Sacramento would no way come in here and say, "We endorse wood, we're not for wind, or anything else."

They are looking strictly for a market-driven approach that all parties can participate in.

So the EDF proposal that you're talking about, Vince, seems to be that, those particular entities and some other cities counties also subscribe to it. They said, "This is fair. We can compete."

MR. SCHWENT: In your previous proposal, at least -- and again I apologize -- it seemed to be based on -- the competition was based on -- essentially you give the same amount of production incentive to all technologies. You just divide it up equally, more or less.

That raises a question in terms of if we need diversity of resources in the state of California and if simply coming up with some average production incentive payment or a rebate, I suppose, might be perhaps too much for one technology that perhaps doesn't even need that much money and might be too little for a whole another technology that perhaps at this point in its evolution needs slightly more money.

So how would such a program which would just have an absolute one number fits all deal with our diversity goals here in the state of California?

MR. KENNELLY: Perhaps the refinement to the CTC rebate solves that issues because the information that you haven't had a chance to review says we will just pay the full percentages in each, that is existing new and emerging, to the consumer in the form of a CTC rebate.

And then all of the ideas you heard today, somebody said we want to buy down debt, somebody said we want to redo our wind power, somebody else wants to make a change in fuel, you could do all of those things.

Each technology, and more importantly, I think, each plant within a

technology, could do what they wanted because they were going to be selling to an open market, and the money is theirs unless they've made that sale.

The consumer does make the choice. And then to answer your question, you'd almost have to address that, Vince, to the consumer, what is it they're going to be interested in. And we don't know that.

MR. SCHWENT: Perhaps you could clarify a little. You refer to your program as a CTC rebate. Now the geothermal people have a rebate program, but they don't call it a CTC rebate. You are, I assume, somehow tying the amount of these rebates to some CTC that's foregone for some reason? Is there a tie-in?

MR. KENNELLY: Absolutely. The Bill says you buy 50 percent of your renewable, you get a rebate on your CTC.

MR. SCHWENT: The bills says this?

MR. MASRI: That's not my understanding, Jim, of what it says. It says you buy 50 percent of renewables, you get direct access.

MR. KENNELLY: And you get a buy-down on your CTCs?

AUDIENCE MEMBERS: No, no.

MR. KENNELLY: Okay. Then there isn't a direct tie to it.

MR. WHELESS: There is a reference in AB 1890 about the rebates of CTC for renewable energy.

MR. MASRI: That's what I referred to earlier in some of my questions, there is a reference that the mechanism that the Commission recommends allows customers to receive a rebate on their CTC from the Fund. So maybe you're --

MR. WHELESS: That's what that --

MR. MASRI: -- mixing two things here. But -- okay.

MR. KENNELLY: Well, it is the customer here that would be getting the CTC rebate, but whether it ties directly or not, --

MR. MASRI: But there's no requirement for 50 percent, for example --

MR. KENNELLY: No.

MR. MASRI: -- for that to happen.

MR. KENNELLY: Okay.

MR. MASRI: Okay.

MR. SCHWENT: Well, probably at this point it's probably more useful just to simply read your proposal rather than try to stagger around based on a previous one and find relevant questions.

MR. MASRI: In the interest of time here, I'd like to say that we did not really go through all the questions that we have prepared. And we will be, to the extent we need, in contact with the parties, via phone or other means, to clarify some other points that did not get a chance to do it today.

Okay. I have a card here from Mr. George Donlou, who has a question on including landfill gas projects in the allocation of AB 1890. And I don't know if that's a question to this panel. It's not clear from your card.

MR. DONLOU: I'm sorry that it was unclear. It is not a question to this panel.

MR. MASRI: Okay.

MR. DONLOU: It is really to provide some clarification on some statements made by the geothermal, wind and biomass coalition that was up here

earlier.

And if you'd like, I'll proceed.

MR. MASRI: Yes. Are those in the form of questions to that panel?

MR. DONLOU: It could have been.

At this point it's mostly comments to clear up a misconception, --

MR. MASRI: All right.

MR. DONLOU: -- if I may. I think that it would be in the interest of the proceedings here for that to be clear.

And basic -- shall I proceed or should I wait?

MR. MASRI: Yes. I think we're done with this panel. Thank you very much.

Let's proceed, sir.

MR. DONLOU: Thank you. My name's George Donlou. I'm with Pacific Energy. I'm the Business Manager for the landfill gas energy projects. Pacific Energy has seven of these projects in California, and they total about 32 megawatts total.

Basically I wanted to address a couple of comments that I saw in one of the proposals, and as I said earlier, from the geothermal, biomass and wind coalition. And that was regarding the tax incentives that supposedly are supporting the generating side of the business, if you will.

The production tax credits which are the tax incentives they're referring to, the Section 29, are basically given to the generating -- or I'm sorry, the gas side of the business, and not to the generating side. You have to make a sale, as the one

gentleman pointed out. You have to be profitable.

It does no good out have a tax credit in your hand if you have no income. So there has to be a sale. The gas-producing side has to make a sale that is profitable.

And so also there was a comment regarding a shifting or an allocation of costs, well, basically that goes against what's happened here.

The gas-producing side has to have a profit, so really if there's going to be any shifting, you're going to want to have it on the gas side, so you could take full advantage of the production tax credits.

So in this regard, the generating side, it is not really receiving any benefit from the tax incentives.

Another point is that public entities, such as municipalities that have their own electrical generation facilities, will not receive any benefit from production tax credits. So they will not be supported by this.

The other piece is the government mandate that was referred to. That government mandate is in the form of the new source performance standards. And that is under the new Clean Air Act. And that performance standard does require that these landfills collect the gas, but it doesn't require that they generate electricity.

In fact, it's more expensive for a landfill owner to generate electricity because of all the things that are involved in supporting an electrical generation facility. The fuel has to be stable because you're generating electricity. You can't have your system going up and down. If it is going up and down, that incurs more O&M expenses. So you want to have as stable a facility as you can.

You have to have trained people that know how to go out there and tune the landfill properly.

The other alternative generally is a flare. And the flares are preferred by the air boards because those happen to be cleaner burning than the internal combustion engines.

So there is a tendency to actually pass these costs along to the generating side. They're not going to absorb those costs. Besides that, the major expenses are in the landfill gas to energy industry. The major expenses are on the generating side, and they're not on the collection system side.

The collection system basically consists of plastic pipes drilled in -- they're wells, and they're interconnected. That is not all that expensive, I mean, in the large scheme of things. The major costs are on the generating side. And that's where, if you've seen some of the numbers as far as costs involved, that's where those numbers are mostly coming from.

And that's basically about it. There was comments regarding the tipping fees, too, support this. And, frankly, landfills cannot just increase their tipping fees regardless of what the market conditions are.

And a case in point is Stockton. They just -- the Austin Road landfill just raised their tipping fees, and it shifted all the trash to a competing landfill. They were unable to cover their operating costs. They had to go back and reduce those tipping fees. So there isn't all that -- these benefits are limited, and that's basically what I wanted to try to get across and clarify.

MR. MASRI: Thank you.

MR. DONLOU: Thank you.

MR. MASRI: The next I'd like to call is on EDF as the next proposal.

MR. ARTUSIO: I'm not sure where Dan Kirshner is right now. But I'll sit in in the meantime and answer any questions to the best of my ability.

MR. SCHWENT: I apologize.

[Comments off the record.]

MR. MASRI: We can switch the order and go to Working Assets, if that's okay.

MR. ARTUSIO: That would be -- thank you.

MR. SCHWENT: There he is. He's back.

MR. MASRI: Okay. Now that Dan is in the room, we'll just stick with the order of EDF first.

MR. SCHWENT: What sorts of limits would you imagine in your proposal to the amount of the Fund or some percentage of the funds that could be provided to any one bidder? In other words, could one applicant come along during a cycle and swallow up the entire bid amount?

MR. KIRSHNER: Well, I'm caught between responding to the proposal as it was and our proposal, our compromise today.

One of the points of the compromise today suggests that no company get more than 50 percent of the funds, and that's just a suggestion on the percentage. But that has been an issue with a number of people we've talked to, is to preserve that diversity among applicants.

MR. BLEES: Did you say five-oh, 50?

MR. KIRSHNER: Yes.

MR. SCHWENT: Your proposal of today, having just seen it and scanned it, but it basically seems to be more to the question of allocation, where you would, under your proposal today, have approximately 29 percent of the funds available for new, open category. In other words, all technologies competing. New generation from all technologies, if I understand that. Have I got that right?

MR. KIRSHNER: Yes.

MR. SCHWENT: So the mechanism that you would use, though, has presumably not changed from what you submitted last week?

MR. KIRSHNER: That's correct.

MR. SCHWENT: Okay. If the production incentive that you have proposed here was deemed by the IRS to offset federal production tax credits, would you have any solution to that problem or have you thought that one through?

MR. KIRSHNER: I don't know if I have thought it through. I certainly have thought about that. Our mechanism is flexible between whether the funds are provided as production incentives or customer rebates.

Either way it's a cents-per-kilowatt hour amount. It's just a matter of where those funds are directed.

It's my firm belief that the funds provided as a customer rebate would not trigger the reduction of the federal production tax credit.

It's also, and others have looked into this, it's not clear even that funds provided as a production incentive to a producer would trigger the federal production tax credit. But that's a difficult issue that won't be resolved until the IRS

actually rules on it.

MR. SCHWENT: In your proposal of November 19th and with regard to production incentives going to end-use customers, you mention that the retailer would have the flexibility to allocate the credit to different customers at different rates depending upon the portfolio of power they are purchasing.

Could you clarify what you mean by "different rates"? Page 2 of November 19. [Holds up proposal.]

[Mr. Kirshner hands proposal back to Mr. Schwent.]

MR. SCHWENT: I stand corrected. I was already on to the next proposal. No wonder that didn't make any sense.

We'll try another question. We'll save that question for Working Assets when they get up here. All right. Well, we'll save that one for them.

You propose that the production credit be for a duration of five years for any particular project. Why five years? Do you think that's adequate for a new plant to be able to finance using this credit? Would you be open to a longer period?

MR. KIRSHNER: Yes. As I said and as we stated in the original proposal of November 4th, five years is a compromise between wanting the market to do decisions, wanting to leave these decisions to independent actors as to what projects are viable, that is giving money to people, especially giving money upfront becomes a banking function, of what level of risk is our people willing to take.

And it's my preference that that banking function not be taken over by an administrative agency, just for administrative efficiency for the problems of those who win and lose, of getting the money out there. We'd rather have a more

objective market-driven method for that.

So the key issue is to extend the period of money, that money is given out long enough so that, in fact, those independent actors have to make that decision, that is will this project be viable so I will see that money?

We have to have a guarantee, a sufficient guarantee on the part of the providing agency, we're going to provide a cents per kilowatt hour, that that's when production occurs that those cents per kilowatt hour will be provided.

And the question is, well, is five years long enough to be financeable, right? And I think that's actually the wrong question.

If we want something to be financeable, you should give people money upfront, that is bankers that want their money back as soon as possible.

So the purpose of stretching it out over five years is not to create something that's financeable, it is to make the market make the decisions.

MR. SCHWENT: But if, since your proposal just relates essentially to new production, if you don't offer an incentive and you prefer not to give them a lump sum, buy-down upfront, but rather make this production incentive so they have to generate electricity in order to get paid, then how can you expect there to be a market of new generation if you're not giving that production incentive out in a way in which they can use it to finance a new plant?

MR. KIRSHNER: Well, let me -- I mean this is obviously -- it's not a matter of one extreme or the other. We can cite how many years to provide a production credit. A production credit could be provided over one year.

Somebody would have to make sure -- so you could go to a bank and say,

"Look, I built this plant out of junk. It's going to last one year. Give me my money."

That's not what we want people to do, so we want them to -- but what is the correct number? Is it five years, seven years, ten years? I don't know. Five years was chosen as a departure point of something that balances between the need for having a long-term period to make sure that the market makes the correct decisions about a viable project, viable for the long term; and the short term of this transition period, the need to get things happening and not to stretch out this money forever.

MR. SCHWENT: Since, as I understand your proposal, you would chose between competing proposals. You would select the one that requested the smallest cent-per-kilowatt-hour production incentive payment; is that correct?

MR. KIRSHNER: Absolutely. Just that one number.

MR. SCHWENT: So if one proposer came in and said, "I'd like a very high number, but you only have to pay it to me for a year," and somebody else comes in and says, "I'd like a much lower number, but I need it for ten years," how would you compare and rate those two proposals? How would you select which one you'd fund?

MR. KIRSHNER: I've thought about that a lot, and I don't see a simple way to make such a comparison. I think a drawback is everybody's limited to the same term, is the only way to make comparisons quite easy.

MR. SCHWENT: Okay. So you'd propose to pick one term, everybody comes in and bids for a production incentive?

MR. KIRSHNER: Yes. And it's another reason to pick a somewhat

shorter number. We're not expecting there to be viable projects that really are less than five years.

MR. SCHWENT: All right. But geothermal's testified they would support a rebate but it'd be a rebate with a ten-year term contract affixed to it. You're not opposed to a ten-year term if that's what it took, from a practical standpoint, to make these plants financeable?

MR. KIRSHNER: Correct.

MR. SCHWENT: I believe you require that they get the plant on the ground in 12 months after they receive the award?

MR. KIRSHNER: I believe the initial -- yeah, the initial proposal is three months to either have a letter of intent from an end-use customer and post a moderate performance bond. And then a further 12 months either deliver energy or post a larger performance bond.

MR. SCHWENT: All right. So a plant that needed two years or more because of permitting or whatever, could get the additional time but they'd have to post a larger performance bond; is that how you'd handle that?

MR. KIRSHNER: Yes.

MR. SCHWENT: There's a question that arises in terms of our triage approach, if you will, which is is there a way you could see this mechanism protecting against a situation where an industry or a plant came in that really needed no money whatsoever, but knew that it could underbid everybody else in that particular pool, that particular bid, and so chose to come in and put in a low bid. They'd be awarded money when they needed it, not at all. Is that a possibility under

your approach, and if so, is there a way to guard against that?

MR. KIRSHNER: I believe it is a possibility. The guards are that this allocation mechanism only applies to new technologies. And it is perfectly competitive and open. But it is modeled on our competitive system.

If someone is able to undercut everyone else and get in there at a lower price, they win. And I think ultimately we'll see more such technologies come in and ultimately that will be competed away and the state and the consumers will benefit.

MR. SCHWENT: You said "new technologies." But just so we don't get confused on the definitions, you're referring to new generating facilities, I presume?

MR. KIRSHNER: Yes. I should say "projects."

MR. SCHWENT: All right. I know we have these confusing issues in the language of the Bill.

Since EDF is primarily an environmental organization and since existing plants have environmental benefits, what's the environmental rationale, if you will, in terms of the benefits to the environment for a program that would focus more heavily on new versus existing or --

MR. KIRSHNER: Well, as far as this program goes, it's just an allocation method for new. And I haven't presupposed to design an allocation method for existing.

Separately from this proposal is an issue of should the ratio of overall funds from new versus existing be in the 40- to 60-percent range. And my position has always been that I hope that that would -- there would be some merit basis

looking at some of those possible benefits.

As time goes by, the Staff has not stepped up to the plate to produce this merit ranking, I despair of -- you know, I'm --

[Laughter.]

MR. KIRSHNER: I certainly will not get to such a merit basis.

MR. SCHWENT: But if that merit basis said that one could get more air quality benefits from a subsidy to an existing plant or an incentive to an existing plant versus an incentive to a new plant, would that argue for -- whether they're getting 50 or 60 percent of the funds to existing as opposed to 40 percent to existing and --

MR. KIRSHNER: Yeah, I would follow that logic.

MR. MASRI: I have one question, Dan, which is on page 1 of your November 19th proposal, where you say "projects that come off their Standard Offer Contracts should be freed to compete for remaining funds."

And I think that still applies in your current scheme where you still have a bidding.

MR. KIRSHNER: Yes.

MR. MASRI: Now I would like to clarify what you mean by "coming off of their Standard Offer Contract." Do you mean all Standard Offers? Do you mean Standard Offer 4 only? And do you mean coming off both energy and capacity, completely off the contract?

MR. KIRSHNER: Completely off the contract of any Standard Offer, including Standard Offer 1.

MR. MASRI: Okay. Thank you.

I think that completes Staff's questions. We do have questions from the audience for EDF. One --

MR. KIRSHNER: Christo will be handling these.

MR. MASRI: Delegation. Robert Lynette. Mr. Lynette.

MR. LYNETTE: I ask this as a 34-year, card-carrying Sierra Clubber and a strong defender and contributor for many years to EDF. Have you guys estimated the impact on, A, each renewable energy industry in the state? And, secondly, the impact on the environment in the state?

I ask this because my instincts tell me your proposal is going to be a disaster on the environment and certainly on the wind energy industry. If you can answer that.

MR. KIRSHNER: I certainly have. I've tried to make these estimates --

MR. LYNETTE: Can you identify it for us?

MR. KIRSHNER: Yes. These have been proposed here. There has been responses from your association, American Wind Energy Association has formally filed here. Contrary to -- I haven't had a chance to make any statement on this -- contrary to the statements there to AWEA's knowledge, that I have not talked to anybody in the industry, that is simply not true. I've talked to plenty of people in the industry including your Mr. Harmon. So I recommend that to you.

And I am eager to get more comments on that, but my analysis says, and even after an amendment by AWEA, it says existing projects, other than -- the bulk of existing projects survive under their current contracts.

And I'd like to be corrected on that. I'm happy to be corrected on that --

MR. LYNETTE: I would like to correct you. The bulk of the projects will not exist, certainly in the wind energy, under the existing contracts. I am absolutely certain of that.

And if you have data that indicates otherwise, I'd like to meet with you and talk to you about it.

MR. KIRSHNER: I'd be happy to. I called your company many times.

MR. MASRI: All right. Thank you very much.

Yes.

MR. BLEES: I don't know if that was clear to everybody else, but I sort of had the feeling that you guys were saying the same thing but thinking that you were disagreeing?

When you said the bulk of the existing projects are surviving under existing contracts, are you saying that when the support of the existing Standard Offer Contracts disappear then those projects will fail?

MR. KIRSHNER: Yes. But I'm including the post-year-11 period. So the short-run average costs plus capacity payments covers -- and maybe this is our area where we're going to have trouble -- but covers operating expenses.

MR. LYNETTE: It doesn't. I will tell you it plainly does not. All you have to do to prove that to yourself is get in a car and drive through Altamont Pass and take a look at what's happening. The machine's are being deserted. They're rusting. They're going to hell.

Clearly that's not good business if these are profitable. They're not.

They are absolutely going out. And if you're under the misconception that SO4 is -- that is, after the cliff, will support these, then we need to talk. It's not right.

MR. BLEES: Is that what you're saying, that even after the projects fall off the cliff, they will continue to survive?

MR. KIRSHNER: The data I have, and even as amended by AWEA, still comes out to that conclusion.

MR. LYNETTE: Have you seen --

MR. KIRSHNER: Operating costs less than 4 cents a kilowatt hour.

MR. LYNETTE: Have you seen the California Energy Commission's reports on annual production out of the wind energy business in California? Have you seen them declining?

MR. KIRSHNER: Sure, sure.

MR. LYNETTE: Why would they do that if they're making money? Why are they not?

I'll tell you why they're not. They're not maintaining them, okay? They are all going to hell. That's the answer.

MR. FERGUSON: Could I ask a question? This whole issue about the viability -- I'm Rich Ferguson from the Sierra Club, to join on this environmental coalition.

Is it possible to get the financial records from these projects and see for ourselves where the money is going? We have gotten --

MR. LYNETTE: I'd be happy to sit down with you. Yeah.

MR. FERGUSON: -- numbers from all over the place. I mean if you are

telling me that it is more expensive to run a wind plant than a nuclear plant, this is amazing news.

MR. LYNETTE: No, I don't believe I ever said that.

What I --

MR. FERGUSON: Well, we know how much they want to run their plants.

MR. LYNETTE: Well, let me be quite specific about it, okay? Somewhere, including capacity and energy today, we're in the neighborhood of 4 cents in Altamont Pass. Okay.

And at 4 cents, and when you include operations and maintenance, which includes transmission fees and leases to lease-holders, not just the maintenance of the machines, I mean you throw that all in together, you barely make it and, in fact, most don't today.

And they're either going to go out or they're going to repower. And they need the small help to repower. I mean that's what this proposal is about, to help in that repower.

But if they don't get repowered, and, see, this is what bothers me as a Sierra Cluber, and I'll tell you, I sat on the first Sierra Club National Energy Policy Board in 1974 about these sort of things and renewables. And what bothers me is what we're going to do is let existing projects disappear, which are already permitted, already have their environmental impacts rather than replacing them with projects that can almost double their output, take no more land use up, no more resources up, and continue to employ the people.

It really bothers me that a Sierra Club proposal would involve doing that. Okay?

MR. FERGUSON: Well, we are certainly supportive of new investment in the wind industry. I mean there is no question that are aware of that.

The question is where to put the money.

MR. LYNETTE: Yeah, but let me explain something. I have a new wind turbine, okay? Our company has a new technology wind turbine. What is the difference to you, as an environmentalist, whether I take that wind turbine and scrape off an old, out-moded rusting wind turbine that's barely producing today and put it in an existing infrastructure, where I don't have to pour more concrete or make more roads over the wildflowers or anything, where it exists today, as opposed to putting it in a brand new place where I've got to spend four years on EISes, maybe not do it at all, and undoubtedly do more environmental damage?

That's what we're facing.

MR. FERGUSON: Well, I don't think anybody is suggesting that that's the better way to go.

MR. LYNETTE: Well, but this is where this leads to.

MR. FERGUSON: Well, we need to talk.

MR. SCHWENT: One more question of Dan. Well, the new group proposal that's been put forth today, I see landfill gas, I see small hydro on there. There isn't a specific allocation -- well, actually I take that back. There isn't a specific allocation. Both of those technologies would just be eligible to compete in the new category. Is that the intent?

MR. KIRSHNER: Yes.

MR. SCHWENT: Now solar-thermal does not have a little "c" by it, indicating that that would be eligible to compete. Is that a typo or is that specific?

MR. KIRSHNER: Well, eligible and likely.

MR. SCHWENT: Oh, all right.

MR. KIRSHNER: I just frankly -- we understand that we are unlikely to see new development of solar-thermal or a new development of biomass.

MR. SCHWENT: Okay. But as far as small hydro and landfill gas, you have no problems with either one of those technologies from an environmental standpoint? They'd be free to compete to produce electricity?

MR. KIRSHNER: Yes.

MR. MASRI: All right. I thank you very much.

And Working Assets/Foresight Energy is the next one.

MR. SCHWENT: We received your proposal here. You would propose, as I understand it here, to award these credits to, first on the existing side, to the existing technologies in the percentages that you've indicated on this chart, and at the credit rates that you've indicated.

I understand those numbers may be somewhat flexible, but is it still the intent of your mechanism that you would set a credit rate of so many mils per kilowatt hour, cents per kilowatt hour, for a particular technology, and that that would be the only price that's available to applicants from that technology?

MR. ERIC MILLER: That was our intent. And just to emphasize the specific allocation percentages were illustrative and not something that we've taken

a strong position on. Those are simply the existing -- based on the existing generation in the state. And so we so not -- I just wanted to make sure that was clear.

The numbers we had -- our numbers are set to be an incentive to projects. And as such, we had proposed we would set a number, the rules goals was to keep it simple. And we were trying to keep a mechanism that would be simple, efficient and understandable.

But certainly there are other mechanisms to set those rates. They would be more complex. We wouldn't necessarily oppose those, but our goal in this proposal was to create a very simple and clear program.

MR. SCHWENT: So there would be some number for a technology. This number would be set by who?

MR. ERIC MILLER: In this process, I believe, would be the Commission with input from the parties would be the place where that it would be set.

MR. SCHWENT: So you would leave it to the Commission to decide not only how much of the existing money would go to which technologies, but also the credit rate that was set for each one of those technologies?

MR. ERIC MILLER: Yes.

MR. SCHWENT: Again, we have this question of equity and triage again. There may well be plants within an industry where this number is more than they need and others where it is less than they need.

Any comments on the equity of that?

MR. ERIC MILLER: Yes. Sure. I think our proposal is really based on a

different philosophy, I guess, than the triage philosophy. It was based on a view that from the public perspective, transitioning projects into and creating a competitive market with a base of demand and a base of supply was the single most important goal for the long-term health of the renewable industry.

And that that is the focus of this program, is to create that base of supply and demand. And as such it rewards customers and projects who enter that marketplace, and makes an explicit value judgment that projects which are eager to enter that marketplace are more desirable. And those are the projects that our proposal seeks to incent.

And so it's really a different concept than triage. Those projects might chose to jump into the market because they really need to do it and they see the opportunity to save themselves. They might also do it because they're very strong and they are interested in getting stronger. And our proposal would not attempt to distinguish between those two.

MR. SCHWENT: In terms of providing this bridge for, first, the existing renewables, as I read your chart here, for instance, just taking one line, "existing solar," which would be solar-thermal, under your projections here you would support 20 megawatts of solar-thermal per year. Do I read that right?

MR. ERIC MILLER: Yes. That's what that allocation percentage would result in.

MR. SCHWENT: Now they're existing generating capacity is 343 megawatts, I believe. So why would you proposal support -- I don't know if it's true. I haven't look at the other technologies to see if it's the same kind of ratio than the

others. But it seems like this would support a vanishingly small proportion of the existing solar industry, yet you would use all 50 percent of the money that would be available, \$270 million available, for existing renewables. Am I missing something?

MR. ERIC MILLER: Well, I'd say a couple of things. Certainly we do not envision that a contract -- that a project would necessarily leave it's entire contract. And so this could be a portion of these facilities.

And our program is designed to take, as we've all heard, as everyone's heard today, there isn't enough money here to transition the entire industry or to support the entire industry. There's simply not enough funds.

And our proposal is focused on creating a base of a market which can then grow to support the entire industry over time.

MS. LONDON: And let me just add. I think there's some real value to the way we've structured the incentive. The incentive ultimately appears on the customer's bill. And it says "renewable energy credit."

And if you're really concerned about building a market over four years, and at the end of four years, having demand there, what better way to advertise than to have it be right on the bill, "renewable energy credit."

It doesn't distinguish between technologies, and the producer will do that. That is something I think will come out of the certification process of some of the disclosure rules that may be proposed for that.

But if you were to follow the allocation that we've proposed here, at the end of the four years you've got close to 700,000 customers every month get a bill, it says "renewable energy credit." They're going to want it when it's over. When the

renewable energy credit disappears they're still going to want their renewable energy. And I think that's a real valuable advertising tool to have in place.

MR. SCHWENT: So your point is because there's a line on their bill that says "renewable energy credit," that will encourage them to continue to buy renewable energy even after the incentives go away --

MS. LONDON: Yes.

MR. SCHWENT: -- and the price may rise?

MS. LONDON: Yes, exactly. I just think there's -- go ahead.

MR. ERIC MILLER: I just want to add one other thing, because I think we're maybe getting -- this allocation that we proposed really was illustrative. If I plug in the industry proposed allocations among the technologies, which we not oppose, in that case you -- and also the funding levels proposed that would support -- even leaving a higher level of support for existing solar, for example, in the biomass, as requested, by a substantial degree. That would still -- that would assist 126 megawatts of solar. And if you put it at about the same level as the existing biomass, you could get even more than that. So about half of the industry would be supported.

And that's not an allocation that we would -- we propose. Our real intent in the proposal was to propose a funding mechanism, not so much an allocation of the specific technologies.

MR. SCHWENT: Okay. Because with regard to new projects, again you have 7.2 cents per kilowatt hour that you'd be paying to the new projects.

I understand what you just said, but is there any background for how

you came up with 7.2 cents. Is that you think the above-market cost of generation over and above the market price of this power?

MR. ERIC MILLER: That was based on my estimates of what a new wind or a geothermal project might cost and being able to provide the funds only over a four-year period, that that's about what it would take.

And I think from some of the other numbers you've heard around, they're not inconsistent with that figure, as well.

MR. SCHWENT: So when you say over a four-year period, so your intent was to transfer enough money at 7.2 cents a kilowatt hour over a four-year period that you would subsidize the entire above-market cost of a new wind turbine?

MR. ERIC MILLER: So that at the end of that four-year period the project could exist in the marketplace, we assume in a green marketplace, with somewhat higher value for power. But still a relatively conservative under-4-cent-a-kilowatt-hour market.

So basically that project would be at the end of four years fully competitive in the market on it's own from that point forward.

MR. SCHWENT: So it's your intent then that post-2002, these renewables that are selling to the green marketers, what sort of price would you envision paying them for their power? You say less than 4 cents a kilowatt hour?

MR. ERIC MILLER: This proposal was based on -- I tried to be very conservative in our assumptions, which let the price out in the mid-2000s would be -- the market price would be between 2 and a half and 3 cents a kilowatt hour. And

on that basis we could pay 3 and a half to 4 cents a kilowatt hour for that power.

And as the market price goes up, so does the premium. is on if the market price is 4 cents, the public would pay about 5 and a half, 5 and a half cents.

MR. SCHWENT: Okay. Because if what you're proposing came to pass, if I get this right, we have technologies that are trying to get their generation costs down to maybe 4 or 5 cents by 2002, central station technologies, but you don't think even that price would they get from a green marketer. Your proposal would build approximately 97 new megawatts of new generation for an expenditure of \$216 million. What would be available post-2002, therefore, to help any new additional renewable generation?

We get 100 megawatts between now and 2002, a 100 megawatts, and then what happens after 2002? They've got to be able to sell at 3 and a half to 4 cents, or there's no future for renewables?

MR. ERIC MILLER: If the power market is 2 and a half to 3 cents, I think that's right. And I think without -- and that's with a strong green market demanding that power. If you don't have that, they're going to have to be at 2 and a half to 3 cents.

I think it's certainly credible to think that the power markets might be more in the 3-and-a-half- to 4-cent range in that time period, in which these numbers over 5 cents may well work.

MS. LONDON: And in all fairness, I don't see where any of the other -- some of the other proposals that you've got here today would continuing the funds through the revolving loan programs that they've proposed.

But I don't think anyone else has given you an assurance if there's going to be money coming in to support the projects after four years either.

MR. SCHWENT: With regard to the emerging projects, you've developed a rate of approximately 22 cents per kilowatt hour.

MR. ERIC MILLER: Twenty-two mils.

MR. SCHWENT: I don't know if you can speak to the source of the 22 cents. Is there --

MR. ERIC MILLER: Just let me clarify. It's 22 mils, 2.2 cents.

MR. SCHWENT: Oh, I'm sorry. Is there a typo here? It's actually written 2,187 mils, which is presumably wrong, but --

MR. ERIC MILLER: Oh, no. I'm sorry. In emerging that is correct. We -- it's really essentially the greenbacks program, very similar to that program that's been proposed by the PV industry. It's a capital buy-down in dollars-per-watt program. And that basically represents \$2 a watt as a capital buy-down.

So you're taking essentially a lifetime's worth of support at several cents a kilowatt hour and you're moving it up into a capital buy-down.

So the mils-per-kilowatt-hour rate is probably not really the best way to look at it. It's a dollar-per-watt capital cost buy-down. And our understanding from the PV industry is that's a more effective vehicle.

MR. SCHWENT: But, again, your proposal whatever the rate would be, whether it's 22 cents or some other number, it would be fixed. And therefore if a technology currently needed 30 cents or if it needed 15 cents, how would you proposal respond?

In other words, in the commercialization process, what you're trying to do is take a very expensive technology, move its costs down, you've got one point on the curve. How does that respond to the needs of emerging technologies?

MR. ERIC MILLER: I think we've -- at the time we did this we hadn't seen the PV proposal. And I think we would find that really the entire greenback portion of that program, both the rates that are in there and pretty much the funding levels would fit, you could pretty much plug into this. And we would be very supportive of that. So I would say we would endorse that program as probably a more thoroughly developed implementation of what we were trying to get at. And --

MR. SCHWENT: So, in other words, if there was a PV program based on what PV's proposed, that line would be missing from your proposal, emerging technologies would be taken care of by a different mechanism?

MR. ERIC MILLER: That's right. This would be -- I mean this really was an allocation of funds to that propo- -- and if that were the -- that proposal would be a good way -- or the greenbacks, the customer rebate portion of that program, we think would be a very good way to implement the details. And we could certainly flesh that out in a lot more detail than we could.

MR. SCHWENT: And in terms of how this mechanism would work, you state on page 3 that all the credits would be offered in the first round and there would only be subsequent rounds, if you didn't have enough suppliers.

So you may have answered this, but, in essence, at the outset of this program then, they could -- a bidder could get a four-year commitment?

MR. ERIC MILLER: Yes. And we think that's critical to the success of the program, that they need that certainty of knowing what they're going to be able to obtain.

MR. SCHWENT: Have you made any estimates of what amount of existing renewables would be able to sell you power that aren't tied into an SO4 contract, that are able to generate in excess of their contract, or don't have a contract now? Is there much existing energy out there that would be available for green marketing?

MR. ERIC MILLER: My assessment has been there's probably a couple hundred, probably 2- to 300 megawatts that's out there that could fit in that category.

We also, though, I would say very much the contract buy-out opportunity mechanism is a very important part of our proposal, and really we would expect that to be an important source of supply.

But my guess is even without counting that, there's probably 2-, 2- to 300 megawatts out there. I am sure there's at least 200, and my guess is there's a bit more out there that I don't know about.

MR. SCHWENT: So if there was 2- to 300 megawatts of existing and your proposal developed maybe something on the order of another 100 megawatts of new, it would seem that it would be crucial to get some more existing plants to give up their SO4 contracts.

The mechanism you've proposed, what's the source of the money for the buy-outs? Is it this renewable funds, or where would the money come from to buy out those contracts?

MR. ERIC MILLER: What's happening is a contract has a future 20-year payment stream in the form of a capacity payment, that in this mechanism a project would be able to exchange that 20-year stream for customer credits in an equal present value. And so the contract would -- the project would then have a series of credits which it could use then during the transition period to buy down the -- create a customer credit, reduce the customer's cost, therefore allowing a higher price to be paid for the renewable power.

And so the project earns the fund -- earns the money back by earning a higher price from the -- by bringing the customer's cost down, charging a higher price for the renewable power.

And, for example, in our case, they could get -- a project, for example, could get about 7 cents a kilowatt hour, just under 6.8 cents a kilowatt hour over the four years. It would use up all of its credits and fully recover its future value, or recover 80 percent of the contract value.

And by doing that over a four-year period on a present-value basis, that provides the funds that are needed to repower in a very ready form and actually considerably larger amounts than would be available under any of the other proposals, really provides the funds that are needed to fully repower any facility and really get them ready to compete out in the future.

MR. MASRI: I'd like to follow up on that, if I may.

Have you contacted any of the Standard Offer-holders concerning your proposal, and if so, do you have an idea how many of those would be willing to walk out of their contracts and walk into your proposal?

MR. ERIC MILLER: We've talked with a number of companies, a number of projects. We've gotten a strong interest. I think at this stage, given where this whole process is, people aren't really ready to -- aren't in a position of wanting to jump out and say, yes, they definitely would do or not do anything.

And the people we've talked to would apply that equally to some of the direct incentives versus this. That they're really wanting to see where things develop. So we've certainly had a strong interest. I can't tell you the people that have been jumping out to do it.

We also should -- to be clear, this is structured as an incentive to create an opportunity in the marketplace, to create a new market. And that's something that people may -- there's a reason you need to do that.

MR. SCHWENT: You've estimated that you'd generate approximately 700,000 residential customers. You'd be able to supply their 50-percent renewable content. Are those meters? Those are families? What portion of the population that represents?

MR. ERIC MILLER: Those are average residential customers, essentially residential meters is probably the best way to --

MR. SCHWENT: What percentage of the total residential meters in the state of California does that represent; do you have any idea?

MR. ERIC MILLER: That is about two percent.

MS. LONDON: I don't remember have those numbers off the top of my head.

MR. ERIC MILLER: I believe it's about two percent.

If I might --

MR. SCHWENT: Jonathan?

MR. BLEES: Isn't that 35 million residential meters?

MR. SCHWENT: Well, the population, but you've got three or four people to a household.

MR. MASRI: Nancy, I think, has something to offer on this.

MS. RADER: I looked at the Energy Commission's historical statistics yesterday, and it said that there are, if you do the math, it's 11 million households. And so as I calculate it, 700,000 would be 6.5 percent.

MR. ERIC MILLER: Okay. That is a bit higher. Okay.

MR. SCHWENT: Are there any market surveys to indicate that you could hit that kind of penetration based solely on green marketing, that there are that many people out there that are interested in buying this?

MR. ERIC MILLER: Well, there's polling data which we have provided an extensive set of -- apparently I don't have it here on my desk, but it's been filed. And there's been a lot of polling data that consistently shows 50 to 70 percent of the population very willing or somewhat willing to purchase power from green sources.

So we're looking at a relatively small percentage of the number of people who have expressed a strong interest. And that data's fairly widespread at the --

MS. LONDON: Additionally the Massachusetts Electric Pilot Program enrollment period ended on Saturday, so I don't have numbers right now for you

because they haven't given us the final tally on how many customers signed up and how many were within the different categories that they offer. But I believe the number that chose a green option will be well over 6.5 percent.

MR. SCHWENT: From a pilot, the pilot study in Massachusetts.

MS. LONDON: A pilot of four towns in Massachusetts. But I mean it's a pilot, and that's one of the reasons you do pilots is to gather that type of data.

It's certainly not of indicative of what will happen in a real market, but our experience from marketing there was that we could have signed up even more customers had we not been restrained by some of the rules of the pilot.

MR. SCHWENT: Over what period of time do you see reaching that 700,000-customer goal, or how long is it going to take you to get to 700,000 customers do you think?

MS. LONDON: I think we anticipated that by the end of the four years we have hit this target.

And we're also anticipating that it won't just be the two of us sitting here. There will be more marketers and more suppliers, and you'll have a real vibrant market and a lot of interplay going on between people choosing providers and making the kinds of decisions that we all say we want them to make.

MR. ERIC MILLER: From a credit card or a telephone business or something like this, this is not a very large number for the broad -- for California consumers.

MR. SCHWENT: Point 6 on page 2 of your proposal, I think it is, or perhaps that's the question section, the Attachment 1 of your proposal, you say if the

suppliers don't have end-use customers using the credits within three months of reserving the credits, the suppliers are required to give up their rights to those credits. Do I understand that?

MS. LONDON: Um-hum.

MR. SCHWENT: Now if you've got an exponentially increasing number of customers, you're starting presumably at zero, I assume, at the beginning of 1998, and you're --

MS. LONDON: Well, maybe we'll have a few signed up because hopefully we'll start allocating credits before 1998.

MR. SCHWENT: Well, that may be optimistic.

MS. LONDON: Right.

MR. SCHWENT: But at any rate, I presume this is some sort of exponentially increasing number of customers that you have? Is it possible that there's going to be a miss-match here, where you'll have people that were awarded, suppliers that were awarded these credits, since you award them all right at the beginning of this program in 1998, but have nobody to buy their credits because the green marketers don't have sufficient 700,000 customers yet to be able to commit to buy those? Or how does that work?

MS. LONDON: Well, that's what this provision in there, that line that you're referring, puts the onus on the supplier to go out and get the customers, sign them up, so that they can use the credits that they've been allocated.

MR. SCHWENT: But the supplier is the generator; is that right?

MR. ERIC MILLER: Yes, yes. So the effect of that might mean that it

won't -- if it did take longer, it means that they might not all be allocated in the first three months, that, in fact, it might take six months or a year or two years or three years to allocate all the credits.

I personally think they'll go relatively quickly, but I don't see a problem with that. I think if they go right away, it means there's a very strong demand and we're getting lots of customers and we've achieved our goal of creating a green market very quickly. If it takes longer, you've got a four-year period here in which to do that.

MR. SCHWENT: But would they lose those credits and have to come back in and reapply for them again because they couldn't find enough buyers for their credits?

MR. ERIC MILLER: Our assumption is that they would have a good idea before they come in and get the credits, that they know what they're going to do with them.

So that someone wouldn't sort of start from scratch and apply and then think about where to go, that this is a process that someone's going to need to plan for longer than -- certainly longer than three months.

MR. SCHWENT: But this is a first-come, first-serve kind of process in terms of allocating these credits.

MS. LONDON: But there are some limits on it. I mean I don't -- at some review, there's some limits on how much of the total marketshare you can tie up.

MR. SCHWENT: Twenty-five percent, I think you had a limit. But

within that I mean a company's appropriate strategy might be to come in and ask for their 25-percent share on day one the credits were available and hope they could find enough suppliers; is that reasonable?

MS. LONDON: But they better find them in three months or they're going to end up giving back the credits for which they don't have customers.

MR. SCHWENT: In that case, though, the geothermal gentleman mentioned with his rebate proposal, since he needs long-term contracts, he may end up finding customers in the form of large industrial customers, irrigation districts, municipal utilities, in other words, customers other than residential customers.

Is that a likelihood here then, if you require these people to find markets for these credits within a three-month period? Are they not going to go to your firms. They're going to go somewhere else to find a purchaser for these credits?

MR. ERIC MILLER: It's conceivable. I mean that's -- I think it should be clear, our proposal doesn't specifically -- you know, if there's a different mechanism -- if there's a different customer base than the one we're focused on that's a better use for these, then they're going to be -- then that's what the supply -- that's why we elected, even though it's probably not in our interest, to provide the credits to the suppliers. They will then sort out where their best opportunity is.

We obviously feel that we will be an attractive one, or we wouldn't be here, but if it turns out not to be the case, that it's really up to the supplier to find its best market, and it's free to do that.

MS. LONDON: But, having said that, we believe very strongly that the future of the renewables market lies with small customers.

We really think that if you let the industrial customers use these credits first because they're obviously going to be price shopping, they'll use them up. And at the end of four years, are they going to stick with that product? Maybe if they're on a ten-year contract they will. But you'd really have to look at the terms of the contract baseline if you want to really preserve your renewable customer base.

MR. SCHWENT: When you have these credits and these flow through your green marketing companies to the customer, what will be the resulting cost of power that you would project that you would be able to sell power to these customers at, if you had this kind of program, compared to the nonrenewable market?

I mean are you going to be able to sell at a discount because of these credits?

MR. ERIC MILLER: One of the things that's interesting -- you know, even with these two companies, you've got slightly different approaches. We think that's healthy.

I can tell you we're looking at somewhere between what people are paying now and what they'll be paying after the ten-percent reduction, is about the range that we're looking at.

MS. LONDON: And our goal is that we think customers will want to pay initially the price coming out of the power exchange. And we think that this proposal will let us price in a way that's competitive with the price the customer will get if it stays with the utility distribution company.

MR. SCHWENT: Which is --

MS. LONDON: The energy which is --

MR. SCHWENT: May we assume that's ten percent less than they're paying now? Or --

MS. LONDON: Well, the energy component will probably be in the 2-and-a-half- to 3-cents-per-kilowatt-hour ranges. The price gets kicked around a lot.

MR. SCHWENT: Right. But what you would charge the customer -- well, that's right. The question is what you could charge --

MS. LONDON: That's what I'm saying, is that where we're targeting our prices.

MR. SCHWENT: Now this would provide 700,000 customers with power. What happens when you get to customer 700,001? Does that customer all of a sudden see some sort of tremendous jump up in price? In other words, this seems to just be a step function. The first 700,000 get a good deal. After that what happens?

MR. ERIC MILLER: Well, if the money's gone, it's gone. I think it's the same thing of what happens to the next renewable project that doesn't get supported. The same thing. There's not enough money to go around.

I think the key is what have you accom- -- and we believe we 700,000 customers basically purchasing a product and being out there in the marketplace, you've created an industry, you've created a sustainable demand that can then grow because all those people are going to be telling their neighbors and you've then created more demand.

Once the CTC comes down to the point that retail competitors can actually compete with the host utility option, then all that demand of all those extra

people that now want to do this is going to create a -- we expect a number in 2001 to go up dramatically if the -- as the pent-up demand is finally released when the CTC gets out of the way and we can finally compete head to head with the utilities.

MR. SCHWENT: But pre-2001, pre the CTC going away, if you were very successful and had a million people that wanted to sign up, 300,000 of those wouldn't get cheap power, 700,000 would get cheaper power?

MS. LONDON: But wouldn't that --

MR. ERIC MILLER: Not cheap power. They would get green power.

MS. LONDON: And wouldn't that exactly prove the whole contention that everyone's been making, that people are willing to pay a premium for green power? If they're really devoted --

MR. SCHWENT: Well, I guess the question can be looked at two ways. In other words, if only the first 700,000 get cheap power, what happens -- are you going to be able to get customers beyond those? Do you have any market data to say that you can?

MS. LONDON: Well, we believe that we will.

MR. SCHWENT: And to the extent that you can, there's a question about the free-rider, how do you handle a situation where there may be customers out there right now that would be willing to spend, if renewable energy is, say, after 4 to 5 cents a kilowatt hour and the pool price is at 2 and a half, they may be willing to spend that extra 2 cents, 3 cents a kilowatt hour now that never needed these rebates, but you gave them to them anyway because they were among the first 700,000 to sign up?

Is there a way to handle those customers that would have been willing to pay a slightly higher price without the use of the rebates? How do you find those? How do you handle those? How do you

MS. LONDON: I mean part of what you're getting at is the sensitivity analysis. And some of the market tests that a marketer may try in terms of different pricing options. We do this all the time in our other lines of business. We test out what kind of incentives do customers want. And what you're suggesting may be one option.

Initial I think, speaking only for my company, we want to come out of the gate with a uniform price that people understand because it's a new product.

And if it happens that there's someone out there who's fanatic and wants to buy the power and would pay any price for it, what's so wrong with giving them a little break for a while? I mean I don't think that's the end of the world. And I think it's better to get the customer base.

MR. ERIC MILLER: Just to give you a little different answer, because I think you will see different perspectives in the marketplace. If we can find that block customers are willing to pay -- I mean we have two -- as a marketer we have two incentives. We have an incentive to maximize our revenue from our customers. That comes from maximizing the number and it comes from the maximizing the price we can get from them.

So if there's a group of people who are willing to pay more for what we have to sell, there you go.

MS. LONDON: Yeah. I mean it's --

MR. SCHWENT: In terms of where the money should go, I mean the suppliers have said, "Give the money to suppliers," EDF and others have said, "Well, maybe you could give the money to suppliers through a production credit or you could give it through to the marketer through a production credit."

If the money went to the suppliers, the suppliers were able to lower their generation costs, you were able to buy that power from those suppliers at a lower cost, does that cause the same net effect in terms of your ability to sell power to green customers at a slightly lower price?

MR. ERIC MILLER: If there wasn't this pesky thing out there called CTC, that would be absolutely right.

The problem is that the size of the CTC that is imposed in California is so large and so far beyond -- there are so many operating subsidies built into that, that there's simply no way for a retail supplier to compete with the utility while that CTC is in place. Because you just -- when I run the numbers it just doesn't -- you can't take -- pay all of your costs and then pay 30 percent of your competitor's cost and still sell at the same price of your competitor. It just doesn't work that -- you just can't do that.

So you may be able to pay a little bit, but the size of the CTC they were talking about in California simply makes competition with the host utility uneconomic.

So that's -- so that's the reason that it doesn't -- you can't purely do it on that side. The price we would need to be -- if we could have people sell us power at significantly below the power exchange, we could probably make a go of it, but it's

not clear that anybody would want to do that.

MR. SCHWENT: Two last questions. I'll ask you the one that I asked EDF that I should have asked you, which is on page 2 of your proposal, as opposed to their proposal, --

MR. ERIC MILLER: We anticipated this one.

MR. SCHWENT: -- what did you mean by "different rates"?

MR. ERIC MILLER: It really gets back to the question -- the thing I just mentioned about maximizing revenues. That if we have a group of customers who are willing to pay more and don't need the same level of credit to buy down the CTC, then we can take that credit we do have and allocate it across customers who need -- who we do need to provide more support. And that allows us to maximize the number of customers that would get into the program.

MR. SCHWENT: How do you identify those customers? Do you offer them power at different rates and see which ones nibble at which rates; is that what you do?

MR. ERIC MILLER: That's what marketing is called. You go out. You know, you identify niches. You create products. You test market them. You see how they respond. You tweak them. You go back. That's what marketing -- that's what you do. That's where this is all going.

MR. SCHWENT: Lastly, in your proposal there doesn't seem to be anything for the marketing function that others have proposed setting aside one or two percent of the Fund for green marketing, generic green marketing or market studies or whatever. Is that to presume that all of the costs of marketing renewables

and studies would be borne by your companies out of your overhead?

MR. ERIC MILLER: In our proposal, yes, that's what we've assumed. Certainly additional support in helping educate the market is always welcome. So it's not that we wouldn't find that useful.

However, we have to be clear that what this really is trying to do is to create an -- create an industry and an ability for consumers who want to buy green power and people who want to sell -- and projects that want to produce green power to be about to physically get together and do that transaction.

Putting up a billboard that says "Renewables make great energy" isn't very useful if there's no place for anybody to buy it.

MR. SCHWENT: That's certainly true. But would you support the notion of some portion of these funds going to generic green marketing campaign? Would you see some value in that?

MS. LONDON: Well, it sounds like -- it's somewhat difficult to comment depending on which your proposal you're referring to because the proposal is shifting. It changed today from what I heard previously.

I personally would be very supportive of a direct marketing campaign, but I'd prefer to not see it come out of this particular flow of money.

MR. ERIC MILLER: I think there are other funds out there, particularly in the utility customer education funds. Quite a bit of money. There's quite a large pot of money that the utilities have included explicitly in the CTC to do customer education efforts. There's --

MS. LONDON: There's a whole proceeding going on right now at the

PUC on this topic.

MR. ERIC MILLER: And so we feel like that's an --

MR. SCHWENT: That's the money to educate --

MR. ERIC MILLER: That that vehicle would be -- that's already, you know, right on point. And we feel like having that reflect -- educate people about options about their source of power in addition to the other aspects would be a useful exercise.

I guess as long as it didn't come at the expense of creating the ability to actually sell people power, then the more we educate consumers, the better.

MR. SCHWENT: Did the money you referred to is the money to educate the customers about customer choice when they're allowed to have direct access?

MR. ERIC MILLER: Yes.

MR. SCHWENT: Have you been party to those proceedings to see what the reaction of the utilities might be, to some of this money being allocated to promoting renewable power as opposed to just consumer choice?

MS. LONDON: We haven't spoken with them directly about that. But in many of the meetings that I've attended, that idea has come up. And we've certainly been tracking what's been going on in those proceedings.

MR. MASRI: We have three parties who would like to address questions to you. The first one is Nancy Rader. She has three questions.

MS. RADER: I guess I have a big problem about your optimism about signing up 700,000 customers. As I indicated, I calculated that was about 6.5 percent

of California's households.

Granted that green marketing is going to be different than green pricing. But the absolute best green pricing results in the country are Traverse City, Michigan, which has a 3.1 percent response rate --

MR. ERIC MILLER: Excuse me. The number was 20 -- it's 20 percent. Traverse City was --

MS. RADER: Not according to CERT's report.

MR. ERIC MILLER: Oh, well, I've got the report from Traverse City, I'll have to check that number, but 20 percent of their residential -- wait a minute. Let me check the number.

MS. RADER: Well, I have the CEERT report here. The CEERT report says 3.1 percent.

Rich, do you remember?

MR. ERIC MILLER: Excuse me. You're right. It's a 20-percent price premium. Excuse me. I'm sorry.

MS. RADER: Right. So it's a 3.1 percent. And that is way far and above any other green pricing program in the country. And that's for a single project that consumers can see, literally, from the city limits.

I think you're being incredibly optimistic, and I just don't see how you can sort of gamble this money on achieving that goal.

MR. ERIC MILLER: I guess if consumers don't sign up they won't make -- this money won't get spent.

MS. RADER: That's what I'm saying. I'm saying -- I mean, for example,

--

MS. LONDON: Okay. Well, it still exists. And if in a couple of years, none of that money's been spent in consumer credits, then it's still there, it's unspent. And the Commission can say, "Well, maybe it didn't work." I --

MS. RADER: But for the --

MS. LONDON: I would suggest in answer to your question that everything we've seen today has been a pilot.

MS. RADER: Right.

MS. LONDON: And there hasn't by anything where, okay, put together your ideal portfolio, go out and find the specific customers.

I mean I don't know Traverse City any better than I know any town in America. But it's one small town. And I think when you can look at a whole state you could do a lot of niche marketing, you can target your product, you can offer different types of products. I think you're going to have a much better response rate than you're going to have in a pilot programs.

In the pilot programs that we've participated in to date, we've been frustrated by the artificial restraints that are put in place by the rules of the PUC or the pilot administrator, whoever has put in place. And we are confident that we could do much better in an open-market situation.

MS. RADER: But I guess from the point of view of an existing facility that is counting on you signing up those customers in order to get the funds to flow, isn't that a pretty big risk for us to take, that you're going to be able to sign up that many customers when there's no track record for that?

I mean I agree --

MS. LONDON: Well, I mean --

MS. RADER: -- that there may be potential. But you're asking us to take a big leap of faith.

MR. ERIC MILLER: I think that the short answer is yes. I think that we believe that the future of the renewable -- since the renewable industry is not competitive today at current power exchange prices, there is going to be something required to keep it competitive.

And we think this is most -- and I think most people think this is the most promising mechanism to do that.

So if this is not worth trying, then I'm not sure what is.

MS. RADER: Well, I think the difference in our proposals is that we are considering our marketing being the Standard Offer Contract, and we're proposing a way of spending these funds that allows us to survive under those contracts. And that contract is our market.

And on top of that, we want to start building green markets and seeing how they pan out. And granted that those are more lucrative, people will come off their contracts for those markets. But --

MS. LONDON: I would submit to you that there is potentially more value to you during the transition period having your power be sold directly to customers where they see it's a renewable project than having it go into the power pool, and at the end of the four years nobody knows how much of their portfolio was renewable.

I mean you're kind of losing your opportunity to take advantage of the initial niche marketing that can occur right now.

MS. RADER: But if we're surviving under our contracts, why don't we have that opportunity in the year 2001?

MS. LONDON: It just seems to me if you want to build a market right now, that's what AB 1890 asks you to do, and this is a good bridge to that.

MS. RADER: No, I don't agree.

MR. ERIC MILLER: And right now is a period of high retail rates and very low wholesales rates. So it's a very good time for projects to get into that market.

And later -- if we simple wait until 2002 and don't create any base of delivery, then you're going to be exactly where you are now in 2002. There's going to be no --

MS. RADER: But what we're proposing is that we will be able to survive under our contracts in the year 2002 because we'll be getting paid energy rates that are higher and we will have reduced our cost.

And so we're not gambling on the development of a green market, although we want to attempt to develop that market. But I think to risk all the funds on the signing up of those customers is just asking a lot.

MS. LONDON: And part of my off-the-cuff response, but I also mean this quite seriously, is Working Assets is a well established company. I can't tell you how many people come up to me and say, "You have the list." If you don't have confidence in my ability to bring you the customers, then don't do business with

me. But I'm happy to do business with you. And I really am confident that we'll deliver the customers that you need.

MS. RADER: Okay. Well, I mean I looked up your Web page and you have about 250,000 customers nationwide, it said. And that's after ten years of being in business.

And that just doesn't give me a lot of comfort that we're going to be able to count on Working Assets to develop 700,000 customers in California --

MS. LONDON: But we're not the only company that's going to be doing that. And we also think that we're going to get new customers when we offer this particular product. This is a unique product that we have --

MS. RADER: But you're sort of a leader in the field. And for a consumer like me who has Working Assets credit cards and Long Distance, I will look to Working Assets. I mean I'm not going to look to ENRON to deliver renewable energy --

MS. LONDON: The other thing is that one of the other components of our proposal that we feel is very important is that we've tried to provide a mechanism where you can keep part of your Standard Offer Contract and experiment with this other system right now rather than waiting until this period ends. We gave two options on the contract buy-out.

Eric, do you want to expand on that?

MS. RADER: Well, let me get to my second question. People have got to go home at some point.

Per-kilowatt-hour credits that you show, and granted it's an example,

but they're pretty high, 2.3 cents and 7.2 cents a kilowatt hour. And you've indicated in some communications with renewable energy companies that you would expect the marketing cost to account for up to 2.2 cents, which is 95 percent of that credit value, leaving five percent for the generator, as I understand it. And am I understanding that right?

MR. ERIC MILLER: Yes. That's a conservative number. And frankly that's the reason that we decided in the end to give the credits to the producers rather than the marketers so that there's a market allocation. The producer has the credit. If it can find a cheaper way to market the power, then fine. If we're uncompetitive then no one's going to do business with us.

MS. RADER: But we're sort of held hostage to paying you whatever it takes to sign up a customer, which are --

MR. ERIC MILLER: But you can go -- that's why we gave it the marketer. You're not held hostage to anybody. You need to find customers. But you can find them from anyone and anywhere that you wish. And that's what's going to build --

MS. RADER: But you estimated that the cost is 2.2 cents --

MR. ERIC MILLER: I said that's a conservative number. I think it could be quite -- it depends on volume. Part of it -- a lot of it depends on volume.

That's a market just like anything else. The market price is at --

MS. RADER: I guess the only point that I'm making is that you think it will cost a lot of money to sign up those customers, and that leaves very little money for the generation of renewable kilowatt hours.

MR. ERIC MILLER: And unfortunately the CTC is very high and does create a substantial barrier.

MS. RADER: I guess that leads to last my question then. If the CTC is the big barrier, and it is, we agree, why wouldn't then the goal be to keep the existing alive until that CTC is gone and then we don't have that market barrier to deal with any more?

It seems like your logic of trying to overcome that barrier supports more the idea that we should keep renewables afloat until that barrier is gone rather than trying to bang our head against the wall and overcome that barrier while it exists.

MR. ERIC MILLER: I guess the best time to create a new market is where you have a high retail base, high retail prices and low wholesale prices. And that's what's you have for the next four years.

At the end of the four years that's going to start to become -- those are going to narrow. And the ability to get out and really redefine the product and define the marketplace around green power is going to be much more difficult.

I really believe that if we don't do this during the transition, by the time we get out that far into the marketplace, others will have defined the retail marketplace on other terms, and we simply won't have much success in being able to different it.

I think this is a critical time period and a very opportune one from the standpoint of making it relatively easier for consumers to purchase the power.

MS. RADER: Okay. Thank you.

MR. MASRI: Robert Lynette is next.

MR. LYNETTE: I've got two questions. The first one is: In your proposal have you actually sat down by technology, by renewable technology, and said, "Okay. If this proposal is implemented, this is how many of the existing megawatts by technology will continue to go. This is how many will be refurbished or repowered. And this is how much is new."

Have you done that?

MR. ERIC MILLER: I've certainly looked at the economic impacts by technologies. The focus of this is as an incentive. And the incentive goes as far as we have money, which is not far enough. And we all agree on that. If we had more money we could go farther and it would be a good thing, if these numbers could come down somewhat.

We were also trying to look at the support we heard the industries needing in picking these numbers. If those numbers can go down, they can cover more megawatts.

MR. LYNETTE: Do I interpret that as no, you haven't? What I'm asking is quantitatively have you actually, for example, my industry, the wind energy industry, I've got 1500 megawatts installed in California. How many will exist under your proposal four years or three years from now?

MR. ERIC MILLER: I certainly looked at the economics of our proposal on a wind project versus doing nothing and versus the industry proposal. And our proposal, the present value to that project is considerably higher than the industry proposal. It's dramatically higher.

MR. LYNETTE: Okay. Because --

MR. ERIC MILLER: It's provides you dramatically more funds to repower facilities. It comes in the next four years when you need them.

That leaves you in an excellent position to compete in the future with far more support, with many, many, many cents of kilowatt hour more support than the industry proposal.

MR. LYNETTE: Okay. I must tell you, my company looked at your proposal and thought it would put us out of business.

The second question -- and I ask this because of my concern to repower projects in California, our existing projects and other people's existing projects. And so where I'm coming from now is how do I convince the financial community that I'm going to be able to put a project in, either a new project or a repowered project, that is going to have to be financed over maybe 15 years, it's got to last 15 or 20 years, in your case, for example, and in Working Assets' case, how long a power purchase contract will you offer me so I can go to the bank and bank it?

MR. ERIC MILLER: Well, I believe this is something that the market is evolving and I would ask how much -- how long a power contract can you get from anyone at this stage. And --

MR. LYNETTE: I have one. It's 18 years to go. In fact, I have a zillion of them at 18 years to go.

MR. ERIC MILLER: Right. Those are very nice. We all -- everyone who has them is very grateful. Those aren't being offered today.

I think the focus of our proposal is that's great, but what happens next? And what happens next is the market is going to offer contracts.

We believe that residential customers, and because we have a retail sale, the retail price is much more stable than the wholesale price, we'll be able to offer far longer-term contracts than are going to come from large industrial consumers.

MR. LYNETTE: Well, the president of Working Assets told me yesterday they envisioned it to be two years.

MR. ERIC MILLER: And that's her view. I believe it can go quite a bit longer than that.

MR. LYNETTE: How much quite a bit, three years, four years?

MR. ERIC MILLER: I think five to ten years is probably the range.

MR. LYNETTE: Five doesn't work; ten is the bare minimum.

MR. ERIC MILLER: Well, you're not going to sell anything if you -- if that's what you need, no one's going to offer that.

MR. LYNETTE: My point exactly.

What I'm saying to you is this proposal will only work -- will only work -- if the power marketers can offer the generators at least ten-year firm power purchase contracts. And you can't even come close to doing that.

MS. LONDON: Can I ask you a question, Mr. Lynette?

MR. LYNETTE: Yeah.

MS. LONDON: What are you going to do when your contract expires with the utility? Do you think the utility will sign another 18-year contract with you?

MR. LYNETTE: You mean you want me to tell you what happens 18 years from now?

MS. LONDON: Well, you're asking us to tell you something very similar, --

MR. LYNETTE: No. I'm asking you to tell me next year.

What --

MS. LONDON: What we're saying is this the reality of the new market.

MR. LYNETTE: Well, the reality of that proposal and that new market is no banker in the world will even consider financing a project for five years in power purchase.

MR. ERIC MILLER: A multi-billion-dollar petrochemical -- most of the -- the only project financed long-term, fixed- price contract, industrial facilities in the world that have ever been developed have pretty much been in the United States in the last few years under these contracts.

Of the other 90 percent of the industrial infrastructure in the world is developed, which is far more capital intensive in many cases than the energy industry with no long-term contracts. It happens routinely.

MR. LYNETTE: It is only done if you can assure your banker you have a market.

MR. ERIC MILLER: Absolutely.

MR. LYNETTE: How many employees do you have in your Foresight Energy?

MR. ERIC MILLER: We're up to a grand total of three now.

MR. LYNETTE: Fine. What were your sales last year?

MR. ERIC MILLER: If you -- our product --

MR. BLEES: Is this relevant?

MR. LYNETTE: Yeah, it is. Because how do I go to a banker --

MR. BLEES: Well, wait a second. Time out.

MR. ERIC MILLER: It's currently illegal for me to sell my product. So it's a little hard to have a lot of sales.

MR. BLEES: Hold it. Hold it. Eric, hold it a second.

Are you guys talking about financing new projects?

MR. ERIC MILLER: Yes.

MR. BLEES: Okay. What are you going to take to the bank think to get a new wind project financed?

MR. LYNETTE: Oh, very easy. I'm going to repower those existing 1500 megawatts that have 18 years of payments and ten years of production tax credits from the federal government. My banker respects the federal government. My banker respects PG&E to pay that over the next 18 years.

And all I'm looking for is that small adder. If I have that, that is absolutely financeable in spades.

This is not financeable. It's not even close to financeable.

MS. LONDON: It's really surprising to us --

MR. LYNETTE: That's the difference.

MR. BLEES: Well, wait a second. Let me make sure I understand this. You're saying that in order to be able to finance -- what I said was "new," okay, now you're saying repowering.

MR. LYNETTE: Yes.

MR. BLEES: Okay. In order to refinance a new -- a repowered wind turbine, okay, the bank is going to insist that you're not going to get it financed unless part of the package is the remaining 18 years of the Standard Offer Contract?

MR. LYNETTE: No, it doesn't have to be 18. It has --

MR. BLEES: Well, whatever it is.

MR. LYNETTE: Projects need to be financed over a minimum of ten. A minimum of ten.

MR. BLEES: Okay. So you need at least ten years remaining on a Standard Offer Contract?

MR. LYNETTE: Yes.

MR. BLEES: With what kind of payment?

MR. LYNETTE: Four to 4 and a half cents.

MR. BLEES: Four to 4 and a half cents you need?

MR. LYNETTE: Yes.

MR. BLEES: Okay. Four to 4 and a half cents is what you need continuing from the ratepayers?

MR. LYNETTE: Yes, that's right. And that's again supplemented by the PTC, the Production Tax Credit.

MR. BLEES: Um-hum.

MR. LYNETTE: Yeah. And this adder that we've talked about in the AWEA proposal of about .6 cents, .7 cents. That's what's makes all the projects financeable.

But I can't finance on a five-year power purchase.

MR. BLEES: I'm not a Standard Offer expert. Do the Standard Offer Contracts allow you to repower and to continue to receive the payments?

MR. LYNETTE: Yes.

MR. BLEES: Anybody here from a utility?

MR. LYNETTE: That's already been done.

MR. BLEES: Okay.

MR. LYNETTE: It's a fait accompli. His past company did it.

MR. BLEES: Okay. I really get the impression you guys are really talking about apples and oranges, but...

MR. MASRI: Okay. We have Kathy Treleven from PG&E. I believe she's no longer here.

And the last one is Steven Kelly.

MR. KELLY: In the interest of the public good, I will not --

[Laughter.]

MR. MASRI: All right. Thank you.

I think this concludes the questions that we and the parties have of all these proposals. We'd like to thank you very much for giving us all this time and all this effort to help the Committee and ultimately the Commission make a decision in this case.

So we'll see you all in January. Merry Christmas.

[Workshop concluded at 4:47 p.m.]

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CERTIFICATE OF REPORTER

I, **SUSAN PALMER**, a duly commissioned Reporter of **CourtScribes**, do hereby declare and certify under penalty of perjury that I have recorded the foregoing workshop which was held and taken at the **CALIFORNIA ENERGY COMMISSION RENEWABLES PROGRAM COMMITTEE WORKSHOP on the Implementation of Restructuring Legislation (Chapter 854, Statutes of 1996 AB 1890): Renewables, Staff Workshop**, Sacramento, California on the **3rd day of December 1996**.

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I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in the outcome of said workshop.

Dated this **6th day of December 1996** at Foresthill, California.

SUSAN PALMER
REPORTER